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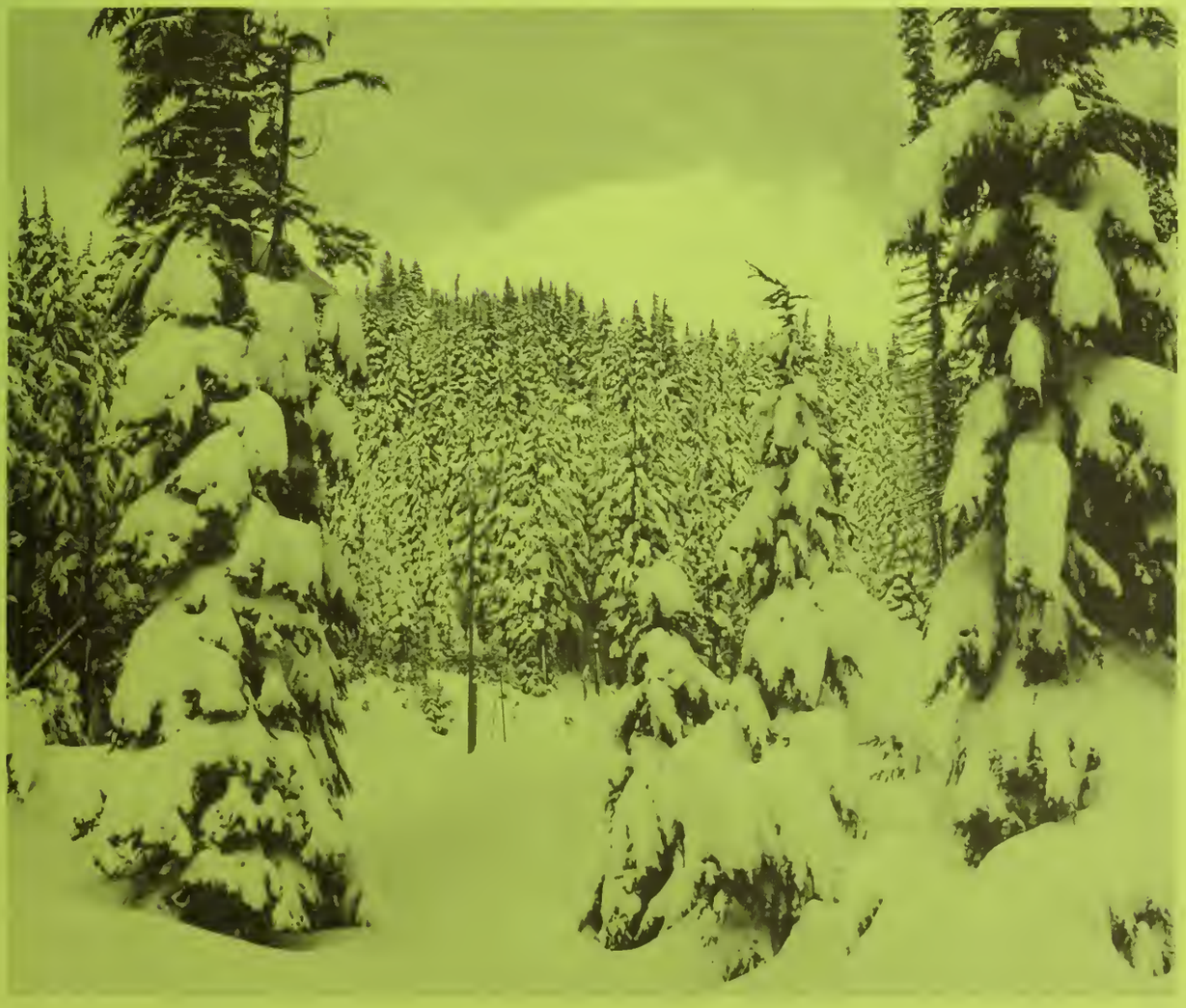
United States
Department of
Agriculture

**Soil
Conservation
Service**

Spokane,
Washington

Water Supply Outlook for Washington

as of FEBRUARY 1, 1985



DEPOSITORY
MAR 6 1985
UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: "Snow scene along trail to Mt. Hood test site snow course"

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P.O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	P.O. Box 98, Bozeman, Montana 59715
Nevada	P.O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4402 Federal Bldg., 125 South State St., Salt Lake City, Utah 84147
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P.O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 — for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 — for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 — and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.

WATER SUPPLY OUTLOOK FOR WASHINGTON

and

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

ISSUED BY

PETER C. MYERS
Chief
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

RELEASED BY

LYNN A. BROWN
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

FORECASTS BY

SOIL CONSERVATION SERVICE
WATER SUPPLY FORECASTING STAFF, WNTC
PORTLAND, OREGON
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REPORT PREPARED BY

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SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201

LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Moisture Station
Soil Moisture Station
Precipitation Storage Gage
Telemetered
FORECASTED WATER SUPPLY
percent of 15 year average
Less than 80% of average
Within 20% of average
More than 20% above overage
Figures = Percent of average for local drainage
PROSPECTIVE WATER SUPPLIES TO AREAS OF WASHINGTON
Based on snow surveys made on approximately first day of month
SCALE IN MILES
C A N A D A
P A C I F I C O C E A N
O R E G O N
STRAIT OF JUAN DE FUCA
STRAIT OF GEORGIA
SAN JUAN
WHATCOM
SKAGIT
SNOHOMISH
CHELAN
OKANOGAN
FERRY
STEVENS
PEND OREILLE
CLALLAM
JEFFERSON
KING
KITSAP
DOUGLAS
LINCOLN
SPOKANE
GRAYS HARBOR
MASON
PIERCE
KITTITAS
GRANT
ADAMS
WHITMAN
THURSTON
LEWIS
YAKIMA
FRANKLIN
GARFIELD
COLUMBIA
ASOTIN
PACIFIC
WAHKIAKUM
COWLITZ
BENTON
WALLA WALLA
CLARK
SKAMANIA
KLICKITAT
97
100
105
107
94
99
110
106
102
112
103
104
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INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

UPPER COLUMBIA DRAINAGE

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Pend Oreille River					
Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Kettle River					
Summit G. S.	18A7	20	39N	35E	4600
Spokane River					
Ragged Ridge	17802	12	27N	45E	3333
Calville River					
Baird	17A6	19	36N	42E	3215
Stranger Mountain	17A5	26	31N	38E	4990
Taga	18A10	6	29N	38E	3370
Okanagan River					
Mutton Creek No. 1	19A1	30	37N	24E	5700
Muttan Creek No. 2	19A4	19	37N	24E	6000
Salman Meadows	19A2SP	33	37N	24E	4500
Methaw River					
Harts Pass	20A5SP	7	37N	18E	6500
Chelan Lake Basin					
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Mirror Lake	20A39	30	31N	18E	5600
Entiat River					
Brief	20819	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Fox Camp	20A36a	17	30N	18E	6510
Pape Ridge	20820	22	29N	18E	3540
Pape Ridge Snow Pillow	20824SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tommy Creek	20821a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	2082SP	35	22N	17E	4270
Stevens Pass	21B1SP	14	26N	13E	4070
Trough #2	20825SP	10	20N	20E	5310
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Stemilt Creek					
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	2087SP	30	21N	20E	4400
Yakima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Fish Lake	21B4SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grouse Camp	20811SP	29	21N	19E	5385
Lake Cle Elum	21814M	15	20N	14E	2200
Morse Lake	21C17SP	6	16N	11E	5400
Tunnel Avenue	2188P	13	21N	11E	2450
White Pass (East Side)	21C28SP	2	13N	11E	4500

LOWER COLUMBIA DRAINAGE

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV
Asotin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Touchet River					
Touchet No. 2	17C5SP	6	7N	40E	5530
Lewis River					
June Lake	22C09SP	26	8N	5E	3200
Lone Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250
Cowlitz River					
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Patata Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280

PUGET SOUND DRAINAGE

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV
Nisqually River					
Paradise Park (New)	21C35SP	13	15N	8E	5500
White River					
Corral Pass	21813SP	30	18N	11E	6000
Green River					
Airstrip	21824P	18	20N	11E	1800
Charley Creek	21825	27	21N	8E	1200
Cougar Mountain	21842SP	21	21N	9E	3200
Grass Mountain No. 2	21827	14	20N	8E	2900
Grass Mountain No. 3	21828	12	20N	8E	2100
Lester Creek	21829	36	20N	10E	3100
Lynn Lake	21850	22	20N	8E	4000
Sawmill Ridge	21831	5	19N	11E	4700
Stampede Pass	21810SP	25	21N	11E	3860
Twin Camp	21B30	18	19N	11E	4100
Cedar River					
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21821P	30	22N	10E	3300
Snoqualmie River					
Alpine Meadow	21848	31	27N	9E	3500
Olallie Meadows	2182P	19	22N	11E	3625
Olallie Meadows East	21855SP	20	22N	11E	3700
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brown Tap	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeaut Meadows (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadows Cabins	20A8	29	36N	14E	1900
New Hozomeen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200

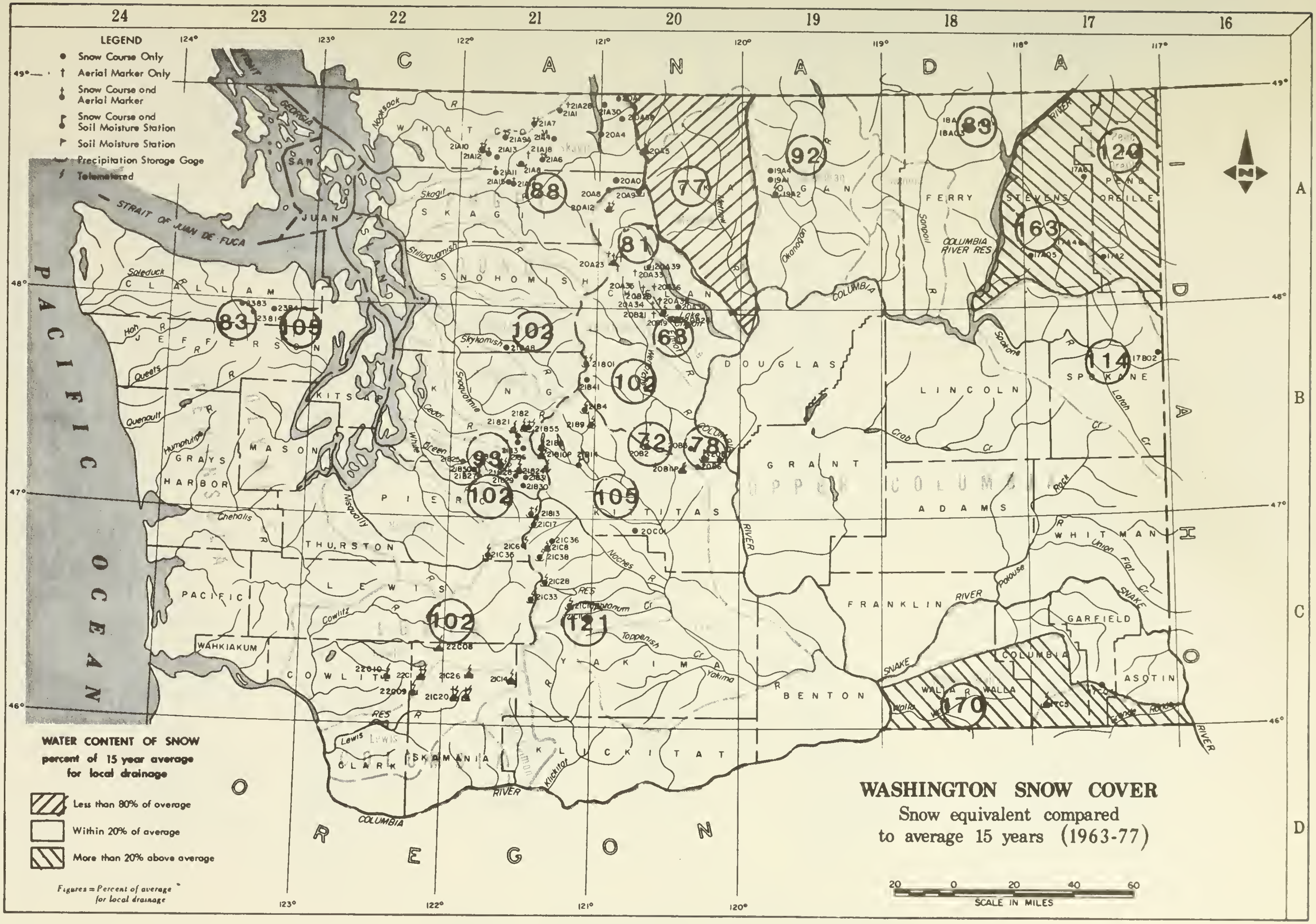
NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Baker River					
Dack Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Mount Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500

OLYMPIC PENINSULA

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Dungeness River					
Deer Park	23B4	1	28N	5W	5200
Elwha River					
Hurricane	23B3	36	29N	7W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow



WASHINGTON SNOW COVER

Snow equivalent compared to average 15 years (1963-77)

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

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Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Kettle River					
Summit G. S.	18A7	20	39N	35E	4600
Butte Creek	18A3	28	39N	35E	4070
Goat Creek	18A4	26	39N	35E	3595
Spokane River					
Ragged Ridge	17802	12	27N	45E	3333
Colville River					
Baird	17A6	19	36N	42E	3215
Stranger Mountain	17A5	26	31N	38E	4990
Chewelah	17A4	11	32N	41E	4925
Okanagan River					
Mutton Creek No. 1	19A1	30	37N	24E	5700
Mutton Creek No. 2	19A4	19	37N	24E	6000
Salmon Meadows	19A2SP	33	37N	24E	4500
Methow River					
Harts Pass	20A5SP	7	37N	18E	6500
Chelan Lake Basin					
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Mirror Lake	20A39	30	31N	18E	5600
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Pope Ridge	20820	22	29N	18E	3540
Pope Ridge Snow Pillow	20824SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
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Trough #2	20B25SP	10	20N	20E	5310
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Stemilt Creek					
Stemilt Slide	2086	30	21N	20E	5000
Upper Wheeler	2087SP	30	21N	20E	4400
Yakima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	2189SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Fish Lake	21B4SP	28	24N	14E	3371
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Green River					
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Charley Creek	21B25	27	21N	8E	1200
Cougor Mountain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21827	14	20N	8E	2900
Grass Mountain No. 3	21828	12	20N	8E	2100
Lester Creek	21B29	36	20N	10E	3100
Lynn Lake	21850	22	20N	8E	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Stampede Pass	21810SP	25	21N	11E	3860
Twin Camp	21830	18	19N	11E	4100
Cedar River					
City Cabin	2183	10	21N	10E	2390
Mt. Gardner	21821P	30	22N	10E	3300
Snaquolmie River					
Alpine Meadow	21848	31	27N	9E	3500
Olallie Meadows	2182P	19	22N	11E	3625
Olallie Meadows East	21B55SP	20	22N	11E	3700
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brown Top	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
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Granite Creek	20A06	25	36N	16E	3500
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Marten Lake	21A9A	23	38N	8E	3600
Mount Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500

OLYMPIC PENINSULA

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
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Deer Park	23B4	1	28N	5W	5200
Elwha River					
Hurricane	23B3	36	29N	7W	4500
Cox Valley	23B14	31	29N	6W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow

WATER SUPPLY OUTLOOK

State of Washington

FEBRUARY 1, 1985

Water supply forecasts for Washington are expected to be average over the entire state. The forecasts vary from 94% on the Yakima River at Parker to 110% of normal runoff on the Methow River. The mountain snowpack was generally near average over most of Washington. Precipitation was near average over the state during last fall. Reservoir storage is fair for February 1. Streamflow for January was below average due to the below normal temperatures.

SNOW COVER

Snow cover measured during the February 1st period is now showing slightly below average for the lower elevations in the cascades. The higher elevation snow courses in the cascades and the snow courses in the eastern portion of the state are near average to slightly above average.

PRECIPITATION

January precipitation was below average over the state, with Northeastern Washington at 23%, Southeastern Washington at 19%, the Southwest Cascade at 4%, and the Okanogan area at 10%.

Precipitation during the November-January winter period has been below average over the entire state except the Northeastern Washington. During this period the Puget Sound area received 26.72 inches, 70% of normal. The Yakima area received 13.17 inches, 66% of normal. Precipitation in the Northeastern area was 106% of normal.

RESERVOIR STORAGE

February 1 stored water supplies are fair to good within the irrigated sections of the state. The Yakima irrigation reservoirs are storing 504,104 acre feet of water compared to the February 1 average of 656,500, or 79% of normal. The reservoirs in the Okanogan Irrigation District are at capacity. Lake Chelan at 226,800 acre-feet, is 76% of normal.

STREAMFLOW

Below normal January temperatures have retarded the snowmelt keeping stream flows low during the month over most of the state. Streams in the state having below average flows were the Pend Oreille River at 66%, Spokane River at 83%, Yakima River at 34% and the Wenatchee River at 42%.

STREAMFLOW FORECASTS - FEBRUARY 1985

THE FOLLOWING SUMMARIZED RUNOFF FORECASTS ARE BASED PRINCIPALLY ON MOUNTAIN SNOW COVER AND ON THE ASSUMPTION THAT PRECIPITATION AND TEMPERATURE WILL BE NEAR AVERAGE FROM THE PRESENT TIME TO THE END OF THE FORECAST PERIOD. APPRECIABLE DEVIATIONS FROM NORMAL TEMPERATURE AND/OR PRECIPITATION WILL CORRESPONDINGLY MODIFY THESE FORECASTS. THESE FORECASTS ARE MADE AS A PRODUCT OF THE COOPERATIVE EFFORTS OF THE SOIL CONSERVATION SERVICE AND THE NATIONAL WEATHER SERVICE. STREAMFLOW FIGURES FOR 1982-1984 ARE PRELIMINARY AND SUBJECT TO REVISION.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
COLUMBIA RIVER SYSTEM /1/							
COLUMBIA RIVER	42000	94	APR-SEPT	39200	43225	48575	44605
AT BIRCHBANK	33560	94	APR-JULY	30400	34569	38210	35705
	24465	94	APR-JUNE	20700	24281	27454	26027
COLUMBIA RIVER	65000	97	APR-SEPT	62500	46662	56425	66841
AT GRAND COULEE	54500	97	APR-JULY	51900	34933	43821	56169
	42700	97	APR-JUNE	39400	65970	32610	44036
COLUMBIA RIVER	71800	99	APR-SEPT	66300	44560	79386	72781
BL ROCK ISLAND	60900	99	APR-JULY	55600	58672	66629	61601
	47900	99	APR-JUNE	42200	69844	49348	48384
COLUMBIA RIVER	105000	104	APR-SEPT	107700	103682	118503	101000
AT THE DALLES	89600	104	APR-JULY	92700	88273	101631	86500
	72900	104	APR-JUNE	74600	70038	80122	70100
PEND OREILLE RIVER SYSTEM							
PEND OREILLE	15200	99	APR-SEPT	12980	12841	17721	15425
BL. BOX CANYON	14000	99	APR-JULY	11780	11482	16324	14156
	12100	99	APR-JUNE	9895	9226	13306	12227
KETTLE RIVER SYSTEM							
KETTTLE RIVER	1920	105	APR-SEPT	2438	2709	2330	1829
NR LAURIER	1825	105	APR-JULY	2327	2534	2174	1738
	1660	105	APR-JUNE	2004	2251	1747	1581
COLVILLE RIVER	141	105	APR-SEPT		182	160	134
AT KETTLE FALLS	129	105	APR-JULY			161	123
	120	105	APR-JUNE		144	132	114

/1/ OBSERVER FLOW CORRECTED FOR STORAGE IN ANY OF THE FOLLOWING RESERVOIRS WHICH ARE ABOVE THE STATION: KOOTENAY LAKE, HUNGRY HORSE, FLATHEAD LAKE, PEND OREILLE LAKE, F.D. ROOSEVELT LAKE, LAKE CHELAN, COEUR D'ALENE LAKE, BROWNLEE, NOXON RESERVOIR AND PUMPAGE AT F. D. ROOSEVELT LAKE.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
SPOKANE RIVER SYSTEM							
SPOKANE RIVER	3190	112	APR-SEPT			2238	2848
AT POST FALLS/2/	3075	112	APR-JULY			2145	2754
OKANOGAN RIVER SYSTEM							
SIMILKAMEEN R.	1540	105	APR-SEPT	1214	1490	1638	1462
NR NIGHTHAWK	1433	105	APR-JULY	1116	1356	1491	1365
	1219	105	APR-JUNE	894	1155	1166	1161
OKANOGAN RIVER	1760	107	APR-SEPT	1688	2170	2046	1644
NR TONASKET	1600	107	APR-JULY	1492	1891	1712	1497
	1350	107	APR-JUNE	1179	1569	1306	1262
METHOW RIVER SYSTEM							
METHOW RIVER	1080	110	APR-SEPT	976	1354	1203	980
NR PATEROS	1000	110	APR-JULY	886	1243	1120	908
	850	110	APR-JUNE	722	1094	918	773
CHELAN RIVER SYSTEM							
CHELAN RIVER	1200	100	APR-SEPT	1079	1261	1376	1203
AT CHELAN /3/	1055	100	APR-JULY	946	1104	1223	1055
	826	100	APR-JUNE	688	901	958	826
STEHEKIN RIVER	877	102	APR-SEPT			938	860
AT STEHEKIN	740	102	APR-JULY		727	800	727
	564	102	APR-JUNE		572	603	553
ENTIAT RIVER	250	106	APR-SEPT		292	282	235
NR ARDENVOIR	226	106	APR-JULY		263	258	213
	182	106	APR-JUN		221	206	172
WENATCHEE RIVER SYSTEM							
WENATCHEE RIVER	1270	100	APR-SEPT				1270
NR PLAIN	1136	100	APR-JULY				1136
	900	100	APR-JUNE				899
WENATCHEE RIVER	1712	100	APR-SEPT	1541	1590	2013	1712
AT PESHASTIN	1545	100	APR-JULY	1385	1432	1791	1545
	1240	100	APR-JUNE	1022	1191	1429	1237
STEMILT BASIN	*134	97	MAY-SEPT				**138
NR WENATCHEE							
ICICLE CREEK	370	100	APR-SEPT				**370
NR LEAVENWORTH	340	100	APR-JULY				**340
	270	100	APR-JUNE				**270

* THOUSANDS OF MINERS' INCHES.

** AVERAGE COMPUTED FOR 1963-1977.

/2/ FORECASTS MADE BY JERRY BEARD, SOIL CONSERVATION SERVICE, BOISE, IDAHO. OBSERVED FLOW CORRECTED FOR STORAGE IN COEUR D'ALENE LAKE.

/3/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE CHELAN.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
YAKIMA RIVER SYSTEM							
YAKIMA RIVER	138	99	APR-SEPT	133	109	152	139
NR MARTIN /4/	127	99	APR-JULY	123	96	138	128
	110	99	APR-JUNE	107	81	121	111
YAKIMA RIVER	905	96	APR-SEPT	917	733	1100	943
AT CLE ELUM /5/	820	96	APR-JULY	825	659	1010	854
	705	96	APR-JUNE	678	589	883	734
YAKIMA RIVER	1970	94	APR-SEPT	2069	2221	2434	2096
NR PARKER /6/	1784	94	APR-JULY	1779	1958	2193	1898
	1567	94	APR-JUNE	1491	1722	1909	1667
KACHESS RIVER	117	97	APR-SEPT	119	105	134	121
NR EASTON /7/	112	97	APR-JULY	108	96	126	115
	98	97	APR-JUNE	91	84	110	101
CLE ELUM RIVER	444	96	APR-SEPT	442	421	516	463
NR ROSLYN /8/	405	96	APR-JULY	397	381	468	422
	340	96	APR-JUNE	310	324	392	353
BUMPING RIVER	141	99	APR-SEPT	137	137	161	142
NR NILE /9/	128	99	APR-JULY	127	128	147	129
	106	99	APR-JUNE	102	109	123	107
AMERICAN RIVER	120	97	APR-SEPT			140	124
NR NILE	110	97	APR-JULY			130	113
	91	97	APR-JUNE			109	94
TIETON RIVER/10/	239	97	APR-SEPT	245			246
AT TIETON DAM	200	97	APR-JULY	198			207
	160	97	APR-JUNE	149			165
NACHES RIVER	850	98	APR-SEPT	812	966	998	867
NR NACHES /11/	768	98	APR-JULY	732	881	945	784
	654	98	APR-JUNE	601	770	775	667
AHTANUM CREEK	46	98	APR-SEPT				47
NR TAMPICO /12/	42	98	APR-JULY				43
	36	97	APR-JUNE				37

/4/ OBSERVED FLOW CORRETED FOR STORAGE IN LAKE KEECHELUS.
/5/ OBSERVED FLOW CORRECTED FOR STORAGE IN KEECHELUS, KACHESS, AND CLE ELUM LAKES AND DIVERSION BY KITTITAS CANAL.
/6/ OBSERVED FLOW CORRECTED FOR STORAGE IN KEECHELUS, KACHESS, CLE ELUM, BUMPING, AND RIMROCK LAKES AND DIVERSIONS BY ROSA, UNION GAP, NEW RESERVATION, OLD RESERVATION AND SUNNYSIDE CANALS.
/7/ OBSERVED FLOW CORECTED FOR STORAGE IN LAKE KACHESS.
/8/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE CLE ELUM.
/9/ OBSERVED FLOW CORRECTED FOR STORAGE IN BUMPING LAKE.
/10/ OBSERVED FLOW CORRECTED FOR STORAGE IN RIMROCK LAKE.
/11/ OBSERVED FLOW CORRECTED FOR STORAGE IN BUMPING AND RIMROCK LAKES AND DIVERSIONS BY TIETON, SELAH VALLEY, WAPATOX CANALS AND CITY OF YAKIMA.
/12/ OBSERVED FLOW OF NORTH AND SOUTH FORKS (COMBINED).

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
LOWER COLUMBIA RIVER SYSTEM							
MILL CREEK	19.0	109	APR-SEPT		13.48	24.62	**17.50
AT WALLA WALLA	18.9	109	APR-JULY		13.39	24.48	**17.33
	18.7	109	APR-JUNE		13.36	21.63	**17.15
LEWIS RIVER	1320	106	APR-SEPT		1255	1170	1249
AT ARIEL /13/	1150	106	APR-JULY		1046	1030	1086
	1019	106	APR-JUNE		821	927	961
COWLITZ RIVER	2100	103	APR-SEPT	2080	1935	4936	2038
BL MAYFIELD DAM	1830	103	APR-JULY	1860	1754	1963	1778
/14/	1550	103	APR-JUNE	1570	1424	1722	1502
COWLITZ RIVER	2700	101	APR-SEPT	3770	2618	2655	2673
AT CASTLE ROCK	2346	101	APR-JULY	3370	2195	2363	2323
/14/	2000	101	APR-JUNE	2860	1739	2080	1980
OLYMPIC PENINSULA							
DUNGENESS RIVER SYSTEM							
DUNGENESS RIVER	155	97	APR-SEPT		197	196	160
NR SEQUIM	126	97	APR-JULY		158	163	130
	94	97	APR-JUNE		117	117	97
ELWHA RIVER SYSTEM							
ELWHA RIVER	536	97	APR-SEPT		538	607	**553
NR PORT ANGELES	440	97	APR-JULY		448	512	**454
PUGET SOUND							
SKAGIT RIVER SYSTEM							
SKAGIT RIVER	2530	100	FEB-AUG		1995	2248	**2532
AT NEWHALEM /15/	2355	100	APR-SEPT		1531	1880	**2356
	1970	100	APR-JULY		1061	1439	**1972
	1485	100	APR-JUNE		698	1004	**1485
GREEN RIVER SYSTEM							
GREEN RIVER BL	335	106	APR-SEPT		190	227	**316
HOWARD HANSEN DAM	300	106	APR-JULY		145	195	**284
/16/	270	105	APR-JUNE		107	174	**256
CEDAR RIVER SYSTEM							
CEDAR RIVER NR CEDAR FALLS	95	102	APR-SEPT		66	80	**93

/13/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE MERWIN, YALE AND SWIFT RESERVOIRS.

/14/ OBSERVED FLOW CORRECTED FOR STORAGE IN RIFFE LAKE AND MAYFIELD RESERVOIR.

/15/ OBSERVED FLOW CORRECTED FOR STORAGE IN DIABLO, ROSS AND GORGE RESERVOIRS.

/16/ OBSERVED FLOW CORRECTED FOR STORAGE IN HOWARD HANSON DAM.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of washington stream basins presents the water content of the snow about February 1, 1985, as percent of the same date in 1984 and 1983 and average of record.

Tributary Basin	No. of Courses	1985 Snow Water Expressed 1984	1983	1961-80 Ave.
UPPER COLUMBIA BASIN				
Pend Oreille	8	162	173	120
Kettle	6	82	107	33
Colville	1	173	239	163
Spokane	6	172	138	114
Okanogan	22	165	112	92
Methow	1	77	71	77
Chelan	5	102	104	31
Entiat	9	100	103	68
Wenatchee	8	147	142	102
Yakima	14	141	150	105
Ahtanum	2	125	189	121
LOWER COLUMBIA BASIN				
Mill Creek	2	219	- -	172
Cowlitz	1	125	134	102
PUGET SOUND				
White	1	- -	- -	102
Green	9	163	86	93
Snoqualmie	1	122	128	122
Skykomish	2	85	127	102
Skagit	13	187	172	88
Baker	8	136	128	90
OLYMPIC PENNINSULA				
Morse	1	122	127	97
Elwha	1	109	91	83
Dungeness	1	166	194	105

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	1985	Measured (April) 1984	1983	Normal*
		COLUMBIA				
Spokane	Coeur d'Alene Lake	225.1	18.4	183.6	168.5	225.0
Columbia	Franklin D. Roosevelt Lake	5232.0	4224.7	5058.7	5177.2	2565.6
Columbia	Banks Lake	714.9	774.8	697.70	709.6	406.2
Okanogan	Conconully Reservoir	13.0	13.0	13.0	11.5	9.1
Okanogan	Conconully Lake	10.5	10.4	10.4	10.4	9.4
Chelan	Lake Chelan	676.1	226.9	392.3	295.1	450.6
		YAKIMA				
Yakima	Keechelus Lake	157.8	83.3	137.1	87.3	139.6
Kachess	Kachess Lake	239.0	149.0	188.8	199.8	217.1
Cle Elum	Lake Cle Elum	436.9	175.8	296.3	284.7	367.9
Bumping	Bumping Lake	33.7	3.8	17.2	6.2	25.4
Tieton	Rimrock Lake	198.0	92.1	151.6	137.8	160.2
		PUGET SOUND				
Skagit	Ross Reservoir	1404.1	880.5	1225.3	1045.1	1033.9
Skagit	Diablo Reservoir	90.6	84.2	83.9	83.5	86.1
Skagit	Gorge Reservoir	9.8	8.1	7.7	8.0	8.3

1/ Based on Active Storage
* 15-yr. Average 1963-1977

PRECIPITATION 1/

Division Average Observations and Departures

Drainage Divisions	Fall Sept-Oct 1984 Observed	Fall Departures 2/	Winter Nov. 1984 - Feb. 1985 Observed	Winter Departures 2/
Northeastern Wash	1.83	-0.65	6.97	+0.42
Southeastern Wash	2.22	-0.29	6.69	-0.24
East slope Cascade	3.24	-1.51	13.17	-6.76
North Central Wash	1.54	-0.05	4.00	-0.69
Northwest Cascade	11.98	-1.23	26.72	-11.14
Southwest Cascade	8.89	-4.59	19.26	-8.84

Northeastern Washington	- Lower Spokane, Colville, Sanpoil, and Lower Kettle Drainages.
Southeastern Washington	- Touchet, Tucannon, and Palouse Drainages
East Slope Cascades	- Yakima, Wenatchee, and Chelan Drainages
North Central Washington	- Methow and Okanogan Drainages
Northwest Slope Cascades	- Puget Sound Drainages
Southwest Slope Cascades	- Lower Columbia Drainages

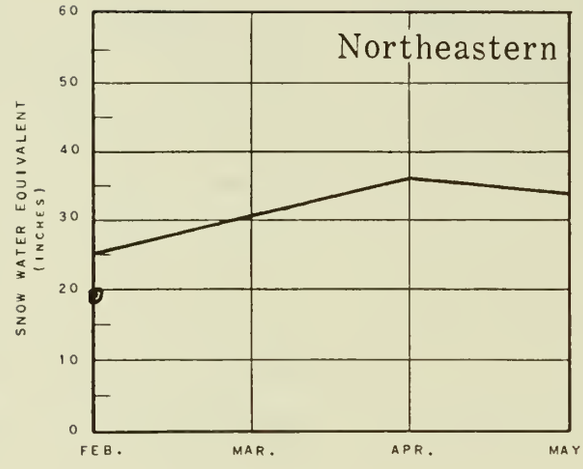
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service

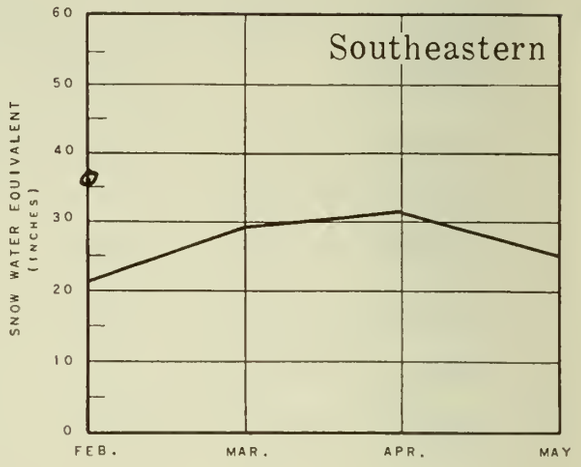
2/ - Departure from 15-year (1958-1972) drainage division average

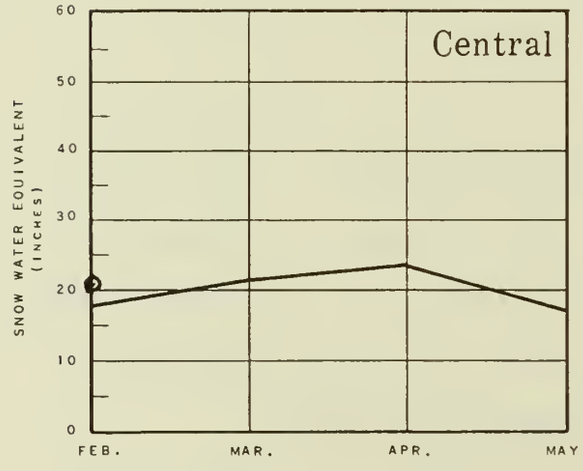
WASHINGTON SNOW COVER

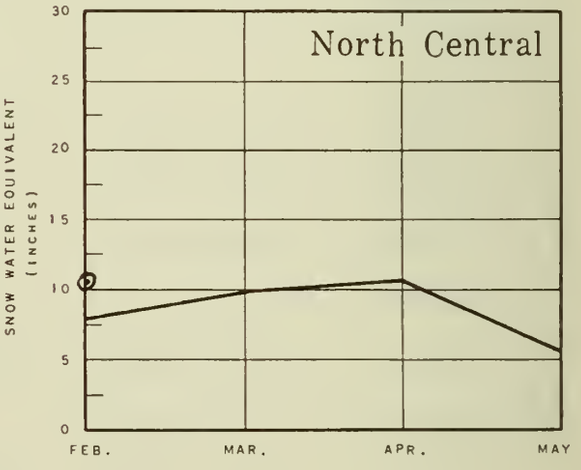
1985

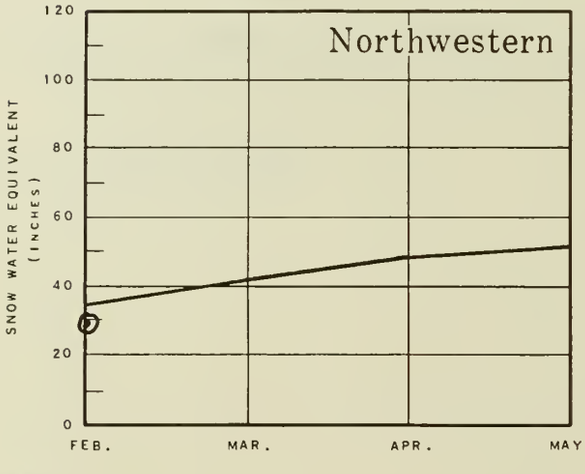
DRAINAGE AREAS

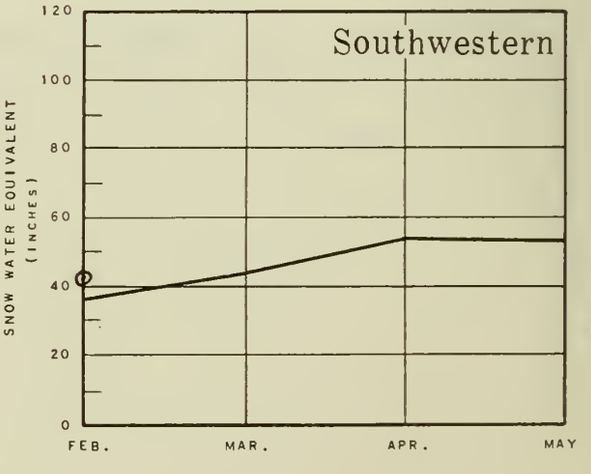












Average ———
1985 – – – –

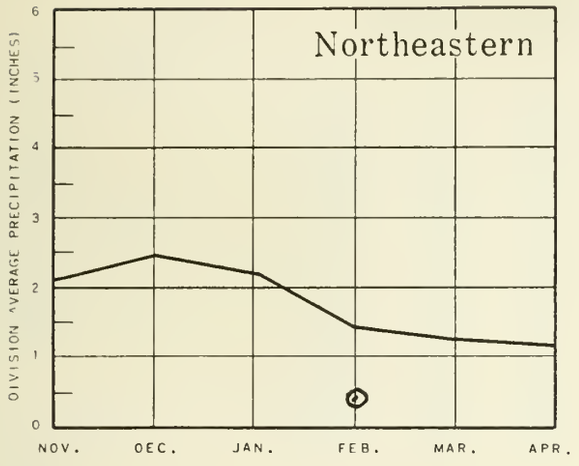
Selected Snow Survey Courses by Soil Conservation Service

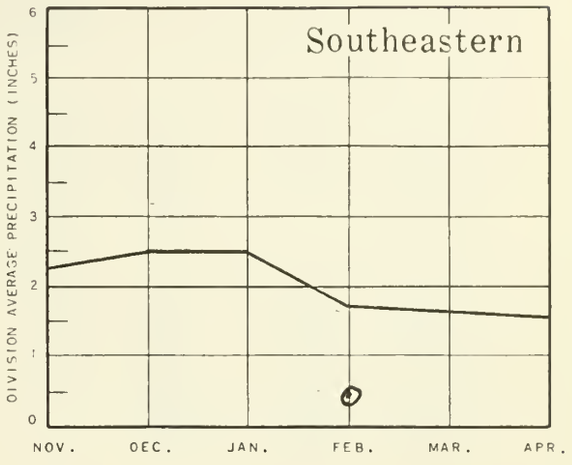
M7-L-22028G

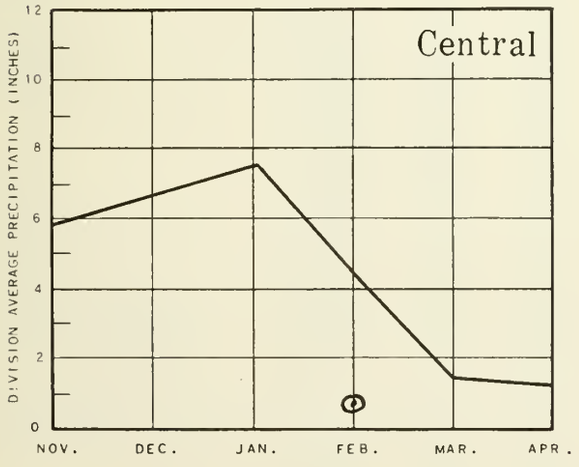
WASHINGTON VALLEY PRECIPITATION

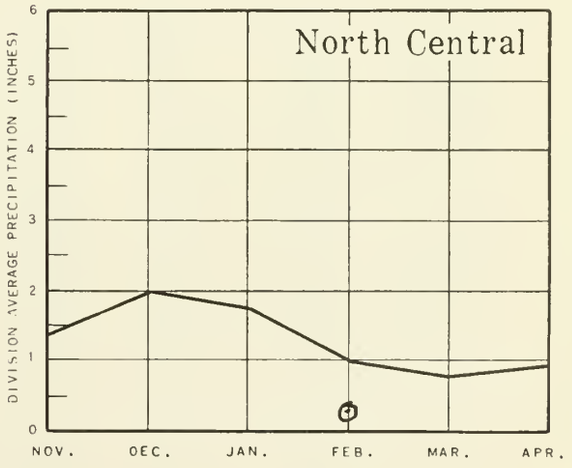
1985

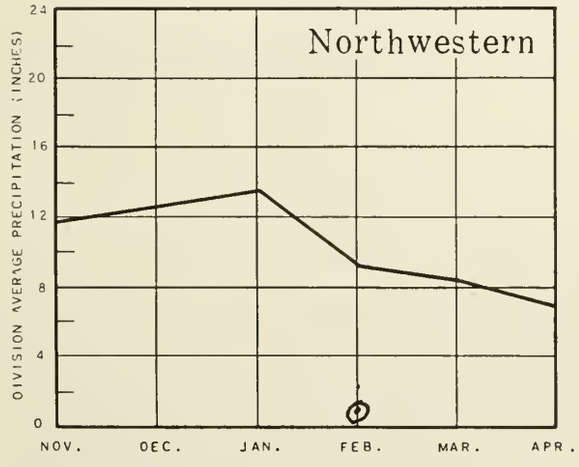
DRAINAGE AREAS

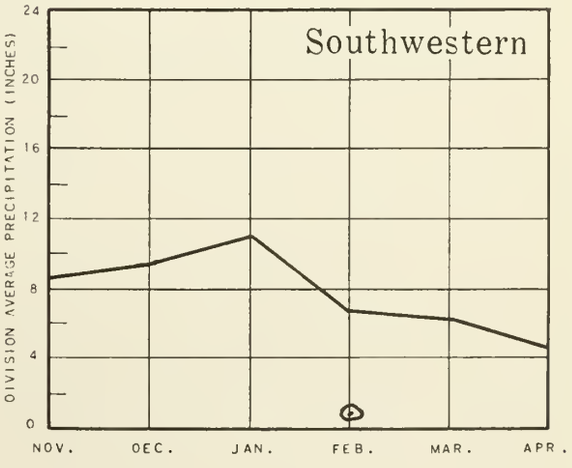












Average ———
1985 – – – –

Preliminary Analysis by National Weather Service

M7-L-22028H

SNOW DATA TO FEB. 1, 1985 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
UPPER COLUMBIA DRAINAGE							
PEND OREILLE RIVER							
Benton Meadow	16A02	2344	1/25	21	12.1	0.0	12.6
Benton Spring	16A03	4900	1/25	47	16.6	9.5	13.5
Boyer Mtn	17A02	5250	1/25	54	18.4		18.9
Bunchgrass Meadow	17A01	5000	1/31	62	22.4		10.0
Chewelah	17A04	4925	Not Measured				
Hoodoo Basin	15C10	6000	2/01	102	42.0	26.2	34.8
Hoodoo Creek	15C01	5900	2/01	97	37.3	24.6	32.4
Lookout	15B02	5250	1/30	82	28.0	15.0	24.6
Nelson	2D04CA	3050	1/01	40	13.3	6.7	11.3
Schweitzer Bowl	16A06	4500	2/01		22.7E	15.8	21.6
Schweitzer Ridge	16A05	6100	2/01		30.7E	23.1	32.9
KETTLE RIVER							
Barnes Creek	2B06CA	5300	1/29	43	13.5	13.1	13.8
Big White Mtn.	2E03CA	5500	2/02	39	10.6	12.9	13.4
Butte Creek	18A03	4070	1/27	28	8.0	8.0	6.7
Carmi	2E02CA	4100	2/03	17	2.6	4.6	5.1
Farron #1	2B02CA	4000	1/31	33	10.6	9.9	17.6
Farron #2	2B02ACA	4000	not measured				
Goat Creek	18A04	3595	1/27	22	6.3	4.9	5.4
Monashee Pass	2E01CA	4500	1/29	33	9.2	7.9	9.4
Summit G.S.	18A05	2150	1/27	23	6.6	6.0	5.7
Trapping Creek Lower	2E05CA	3050	2/03	14	1.5	4.6	4.3
Trapping Creek Upper	2E04CA	4450	2/02	23	4.6	7.3	7.2
COLVILLE RIVER							
Baird	17A06	3215	1/27	32	9.3	5.4	5.7
Chewelah	17A04	4925	not measured				
Togo	18A10	3370	"	"			

Average based on 1961-1980 averages
sp SNOTEL data

WSFB-X4-L

SNOW DATA TO FEB. 1, 1985 - APPENDIX 2

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year	Average #
SPOKANE RIVER							
Above Burke	15B08	4100	1/30	60	18.4	9.0	14.8
4th of July Summit	16B03	3100	1/31	76	23.0	13.2	19.9
Lookout	15B02	5250	1/30	82	28.0	15.0	24.6
Mosquito Ridge	16A04	5110	1/31	82	28.8	18.2	25.8
Sherwin	16C01	3200	2/01		12.6E	8.3	10.5
Sunset	15B09A	5600	2/01	64	21.7	13.2	23.0
Lost lake	15B14A	6000	1/31	130	46.1	26.8	38.0
NEWMAN LAKE							
Ragged Ridge	17B02	3333	1/29	34	11.0	3.4	1.0
OKANOGAN RIVER							
Aberdeen Lake	1F01CA	4300	1/30	18	4.3	4.7	5.0
Blackwall Peak	2G03CA	6250	1/31	60	19.8	17.5	24.7
Brenda Mine	2F18CA	4800	1/30	31	9.4	8.5	9.4
Brookmere	1C01CA	3200	1/31	22	6.8	3.8	6.9
Enderby	1F04CA	6250	1/30	68	25.9	26.4	25.2
Esperon Creek Lower	2F15CA	4400	Not Measured				
Esperon Creek Middle	2F15CA	4700	" "				
Esperon Creek Upper	2F13CA	5400	" "				
Grayback Reservoir	2F08CA	5225	1/23	23	5.2	7.0	6.2
Hamilton Hill	2G06CA	4900	1/29	31	10.6		
Harts Pass	20A05A	6500	1/28	70	24.7	23.7	32.1
Isintok Lake	2F11CA	6300	1/26	16	3.9	3.1	5.9
Lost Horse Mountain	2G04CA	7000	1/31	28	6.2	3.5	6.9
McCulloch	2F03CA	4200	1/30	19	4.8	4.6	5.0
Missezula Mtn.	2G05CA	5100	1/28	26	7.5	3.5	7.1
Mission Creek	2F05CA	6000	2/04	41	12.8	13.2	13.6
Monashee Pass	2E01CA	4500	1/29	33	9.2	7.9	9.4
Mount Kobau	2F12CA	5960	1/27	32	8.5	9.4	8.1

Average based on 1961-1980 averages
s SNOTEL data

WSFB-X4-L

SNOW DATA TO FEB. 1, 1985 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
OKANOGAN RIVER (CONT.)							
Mutton Creek No. 1	19A01	5700	Not Measured				11.8
Mutton Creek No.2 SP	19A11	6000	" "				New
Nickel Plate	2G02CAN	6200	1/30	20	5.7		
Oyama Lake	2F19CAN	4400	1/30 "	20	5.4	3.9	5.2
Postill Lake	2F07CAN	4500	1/30	23	5.3	5.9	5.9
Rusty Creek	19A03	4000	Not Measured				
Salmon Meadows	19A02	4500	" "				
Silver Star Mountain	2F10CAN	6050	1/27	56	20.3	18.1	19.2
Summerland Reservoir	2F02CAN	4200	1/26	22	6.7	5.9	7.3
Sunday Summit	2G01CAN	4300	1/30	20	5.5	2.0	5.0
Trout Creek	2F01CAN	4700	1/31	20	5.2	3.5	5.9
Vaseux Creek	2F20CAN	4600	1/31	20	3.8	3.9	4.5
White Rocks Mountain	2F09CAN	6000	2/01	45	15.3	16.9	16.0
METHOW RIVER							
Harts pass	20A05A	6500	1/28	70	24.7	23.7	32.1
Mutton Creek NO. 1	19A01	5700	Not Measured				
Mutton Creek No. 2 SP	19A11	6000	" "				
Rusty Creek	19A03	4000	" "				
Salmon Meadows	19A02	4500	" "				
CHELAN LAKE BASIN							
Cloudy Pass +	20A22	6500	1/29	18	6.1		29.7
Lyman Lake	20A23	5900	1/29	92	36.4	44.4	39.8
Little Meadows +	20A24a	5275	1/29	76	27.4		30.3
Mirror Lake	30A39	5600	1/29	58	19.2	19.5	10.0
Park Creek Ridge	20A12	4600	2/01		29.0sp	0.0	36.0
Rainy Pass	20A09	4780	1/29	67	22.2		

Average based on 1961-1980 averages
+ Aerial stadia observation
sp SNOTEL data

WSFB-X4-L

SNOW DATA TO FEB. 1, 1985 - APPENDIX 4

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year	Average #
ENTIAT RIVER							
Brief	20B19	1600	1/31	17	4.0	4.5	6.8
Entiat Meadows +	20A33	4540	1/30	68	23.8	21.4	33.2
Entiat River Trail +	20A34	3325	1/30	45	13.0	12.2	18.5
Fox Camp +	20A36	6510	1/30	54	16.2	20.1	41.3
Pope Ridge	20B20	3450	1/30	40	11.6	11.2	14.7
Pugh Ridge +	20A32	6725	1/30	39	12.9	15.2	27.6
Shady Pass	20A37	6200	1/30	45	15.6	17.8	20.1
Snow Brushy +	20A35	3910	1/30	90	33.3	20.2	28.4
Tommy Creek +	20B21	4900	1/30	44	12.8	9.9	20.6
WENATCHEE RIVER							
Berne Mill Creek	21B23	3170	1/30	56	20.1	14.0	20.8
Berne Mill Creek SP	21B41	3240	1/30	57	20.8		19.4
Blewett Pass No. 2	20B02	4270	1/28	31	10.4	17.7	12.6
Chiwaukum G. S.	20B16	1810	1/30	24	6.3	.0	10.0
Lake Wenatchee	20B05	1970	Watershed Logged			Discontinued	
Lyman Lake	20A23	5900	1/31		37.1sp	44.4	39.8
Merritt	20B18	2140	1/30	34	11.6	4.9	1.0
Stevens Pass	21B01	4070	1/30	89	37.2	26.8	36.0
Stevens Pass Sand Shed	21B45	3700	1/30	66	26.3	18.4	25.9
COLOCKUM CREEK							
Trough #2(SP)	20B25	5310	2/01	26	6.5gt	0.0	

+ Aerial stadia observation
# Average based on 1961-1980 averages
sp SNOTEL data

WSFB-X4-L

SNOW DATA TO FEB. 1 , 1985 - APPENDIX 5

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
SQUILCHUCK CREEK							
Beehive Springs	20B03	4400	2/01	19	4.7		6.5
Scout-a-Vista	20B04	3400	not measured				
STEMILT CREEK							
Stimelt Slide	20B06	5000	2/01	31	8.4	9.6	10.8
Upper Wheeler	20B07	4400	2/01	23	6.1		
YAKIMA RIVER							
Ahtanum R.S.	21C11	3100	1/28	20	5.4	5.5	6.1
Big Boulder Creek	21B09	3200	1/29	44	14.9	12.8	
Blewet Pass No. 2	20B02	4270	1/28	31	10.4	17.7	12.6
Bumping Lake Old	21C08	3450	1/31	35	11.0	9.0	12.3
Bumping Lake New	21C36	3400	1/31	42	13.5	10.3	15.5
Cayuse Pass	21C06	5300	1/26	138	57.9		56.3
Colockum Pass	20B09	5370	1/30	35	10.9	13.4	10.0
Corral Pass	21B13	6000	not measured				
Fish Lake	21B04	3371	1/29	62	22.4	20.1	
Green Lake	21C10	6000	1/28	62	26.5	20.5	20.1
Grouse Camp	20B11	5385	1/28	32	10.1	11.1	12.0
Lake Cle Elum	21B14	2200	1/30	23	6.2	2.2	7.8
Morse Lake	21C17	5400	1/31		31.4sp		37.4
Olallie Meadows	21B02	3625	1/31	78	33.0		10.0
Stampede Pass	21B10	3860	1/31		32.9sp	25.8	30.1
Tunnel Avenue	21B08	2450	1/30	39	12.7	8.6	16.8
White Pass E. Side	21C28	4500	2/01	56	17.4	15.0	17.3

Average based on 1961-1980 averages
sp SNOTEL Reading

WSFB-X4-L

SNOW DATA TO FEB. 1, 1985 - APPENDIX 6

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
AHTANUM CREEK							
Ahtanum R. S.	21C11	3100	1/28	20	5.4	5.5	6.1
Green Lake	21C10	6000	1/28	62	26.5	20.5	20.1
LOWER COLUMBIA DRAINAGE							
MILL CREEK							
High Ridge SP	18D19	4890	1/30	66	22.8sp	0.0	
Touchet # 2 SP	17C55	5530	1/30	84	32.9	15.0	19.1
COWLITZ RIVER							
Cayuse Pass	21C06	5300	1/26	138	57.9		56.3
White Pass E. Side	21C28	4500	2/01	56	17.4	15.0	17.3
PUGET SOUND DRAINAGE							
WHITE RIVER							
Cayuse Pass	21C06	5300	1/26	138	57.9		56.3
Corral Pass	21B13	6000	Not Measured				
Morse Lake	21C17	5400	" "				
GREEN RIVER							
Airstrip	21B24	1800	1/30	6	2.0	0.0	4.6
Charley Creek	21B25	1200	1/30	3	0.6	0.0	1.2
Cougar Mountain	21B42	3200	5/30			0.0	14.5
Grass Mtn. No. 2	21B27	2900	1/30	32	10.5	0.0	13.2
Grass Mtn. No. 3	21B28	2100	1/30	13	3.8	0.0	4.3
Lester Creek	21B29	3100	1/30	52	15.6	8.2	16.2
Lynn Lake	21B50	4000	1/30	63	23.6	5.2	15.6
Sawmill Ridge	21B31	4700	1/30	61	19.6	15.2	25.9
Stampede Pass	21B10	3860	Not Measured				
Twin Camp	21C30	4100	1/30	60	20.0	10.6	17.3

Average based on 1961-1980 averages
sp SNOTEL Reading

WSFB-X4-L

SNOW DATA TO February 1, 1985 - APPENDIX 7

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
SNOQUALMIE RIVER							
Olallie Meadows ES	21B02	3960	1/31	78	33.0		10.0
SKYKOMISH RIVER							
Stevens Pass	21B01	4070	2/01		36.8S	26.8	36.0
Stevens Pass Sand Shed	21B45	3700	1/30	66	26.3	18.4	25.9
SKAGIT RIVER							
Beaver Creek Trail	21A04	2200	1/29	29	8.2	4.1	11.3
Beaver Pass	21A01	3680	1/29	54	18.2	13.3	21.9
Brown Top Ridge	21A28	6000	1/28	97	37.6	34.6	43.9
Devils Park	20A04	5900	1/28	71	25.4	18.6	32.5
Freezeout Creek Trail	20A01	3500	1/28	34	10.2	4.5	10.3
Freezeout Meadow	20A38	5040	1/28	51	18.7	13.0	25.4
Granite Creek	21A29	3500	1/29	42	12.6	8.2	10.0
Harts Pass	20A05A	6500	1/28	70	24.7	23.7	32.1
Klesilkwa	3D03ACA	3710	1/28	27	8.7	3.2	9.7
Lightning Lake	3D02CAN	4000	Not Measured				
Lyman Lake	20A23	5900	1/29	92	36.4	44.4	39.8
Meadow Cabins	20A08	1900	1/28	16	4.8	3.0	1.0
New Hozomeen Lake	21A30	2800	1/28	29	8.0	3.0	9.5
Rainy Pass Snotel	20A09	4780	Not Measured				
Thunder Basin	20A07	4200	1/28	46	15.0	4.6	1.0

Average based on 1961-1980 averages
sp SNOTEL data

WSFB-X4-L

SNOW DATA TO February 1, 1985 - APPENDIX 8

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
BAKER RIVER							
Dock Butte +	20A11A	3800	1/02/85	100	40.0	33.0	44.4
Easy Pass +	21A07A	5200	" "	120	48.0	33.0	54.7
Jasper Pass +	21A06A	5400	" "	120	48.0	47.0	63.0
Martin Lake	21A09A	3600	" "	120	48.0	39.0	51.9
Mt. Blum +	21A18A	5800	" "	86	34.0	34.0	44.3
Rocky Creek	21A12A	2100	" "	60	24.0	5.0	22.6
Schreibers Meadow	21A10A	3400	" "	84	34.0	21.0	38.5
S.F. Thunder Creek +	21A14A	2200	" "	10	4.0	.0	8.1
Watson Lakes	21A08A	4500	" "	113	45.0	27.0	41.3
OLYMPIC PENINSULA DRAINAGE							
DUNGENESS RIVER							
Deer Park	23B04	5200	1/28	40	14.7	8.9	14.0
MORSE CREEK							
Cox Valley	23B14	4500	1/29	72	25.8	21.1	26.7
ELWHA RIVER							
Hurricane	23B03	4500	1/30	36	12.1	11.2	14.6
WYNOOCHEE RIVER							
Carrol Pass	23B15	3650	1/30	58	21.6		

+ Aerial stadia observation
# Average based on 1961-1980 average

WSFB-X4-L

SNOTEL READINGS, FEB. 1, 1985 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *
PEND OREILLE RIVER							
Bunchgrass Meadows	17A01 GT	5000	01/31/84	62	22.4		10.0
			01/31		19.7	12.5	17.7
OKANOGAN & METHOW RIVERS							
Harts Pass	20A05 GT	6500	01/28	70	24.7	23.7	32.1
			01/31		29.2	31.4	25.8
Salmon Meadows	19A02	4500	Not Measured				
			01/31		11.4	17.1	12.9
CHELAN LAKE BASIN							
Lyman Lake	20A23 GT	5900	12/84		34.6	30.8	31.0
			01/31		37.1		42.8
Mirror Lake	20A39 GT	5600	12/31		18.2	18.5	18.6
			01/31		19.1		21.5
Park Creek Ridge	20A12 GT	4600	12/31		30.7	17.8	17.2
			01/31		29.0		26.1
Rainy Pass	20A09 GT	4780	12/27		23.0	11.5	13.4
			01/31			27.4	25.3
ENTIAT RIVER							
Pope Ridge	20B20 GT	3450	12/31		12.0	11.6	10.9
			01/31		12.8	12.9	15.6
WENATCHEE RIVER							
Blewett Pass	20B02	4270	12/30		11.2	14.8	10.9
	GT		01/28	36	11.4		
			01/31		12.6	13.0	14.9
Lyman Lake	20A23 GT	5900	12/31		34.6	30.8	31.0
			01/31		37.1	43.3	42.8
Stevens Pass	21B01 GT	4070	12/31		34.1	20.2	12.2
			01/31		36.6	25.5	18.3
Trough # 2	20B25 GT	5300	12/31		6.4	7.7	7.0
			01/31		6.8	1.0	6.8

GT = Ground Truth measurement at SNOTEL site

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SNOTEL READINGS, FEB. 1, 1985 - APPENDIX 2

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *
COLOCKUM CREEK							
Trough # 2	20B25	5300	12/31		6.4	7.7	7.0
	GT						
			01/30		6.8	1.0	6.8
STEMILT CREEK							
Upper Wheeler	20B07	4400	12/31		6.9	9.6	8.5
	GT						
			01/31		7.3	9.1	12.6
YAKIMA RIVER							
Big Boulder Creek	21B09	3200	DISCONTINUED				
Bumping Ridge	21C38	4600	12/30		19.7	20.8	7.7
	GT						
			01/31		20.6	21.3	11.4
Corral Pass	21B13	6000	12/31				
			01/31				
Fish Lake	21B04	3371	12/31		20.4	17.7	17.7
	GT						
			01/31		22.8	20.1	20.3
Green Lake	21C10	6000	12/31		10.3	12.4	12.9
	GT						
			01/31		10.8	12.4	17.9
Grouse Camp	20B11	5385	12/31		10.6.	13.7	8.6
	GT		01/28	39	12.4		
			01/30		0.0	12.0	15.6
Morse Lake	21C17	5400	12/31		27.2	27.5	28.8
			01/31		30.6	32.9	32.4
White Pass E. Side	21C28	4500	12/31		16.0	14.8	12.7
	GT						
			01/31		17.1	16.3	18.4

GT = Ground Truth measurement at SNOTEL site

WSFB-X4-L

SNOTEL READINGS, FEB. 1, 1985 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average *
AHTANUM CREEK							
Green Lake	21C10	6000	12/31		10.3	12.4	12.9
	GT						
			01/31		10.8	12.4	17.9
TOUCHET RIVER							
Touchet # 2	17C5	5530	12/31		33.9	13.4	11.7
	GT		01/31	84	32.9		
			01/31		35.3	15.0	19.1
LEWIS RIVER							
June Lake	22C09	3200	12/31		11.3	5.4	5.3
	GT						
			01/31		25.3		
Lone Pine Shelter	21C26	3800	12/31		27.1	21.0	13.5
	GT						
			01/31		28.9		24.0
Plains of Abraham	22C01	4400	12/31		45.8	44.5	30.7
			01/31		51.5	40.0	42.5
Sheep Canyon	22C10	4050	12/31		33.4	19.8	16.4
			01/31		34.4	19.2	18.7
Spencer Meadow	21C20	3400	12/31			12.3	14.7
			01/31			12.4	16.9
Surprise Lake	21C13	4250	12/31		46.8	28.7	20.3
	GT						
			01/31		52.7	33.6	30.2
COWLITZ RIVER							
Pigtail Peak	21C33	5900	12/31		41.0	25.8	23.9
	GT		01/30	94	35.5		
			01/31		42.6	29.5	33.4
Potato Hill	21C14	4500	12/31		21.8	14.0	13.5
	GT						
			01/29		23.8	14.2	17.3
Sheep Canyon	22C10	4050	12/31		33.4	19.8	16.4
			01/31		34.4	19.2	18.7
Strawberry Landing	22C08	3280	12/31		37.9		16.9
	GT						
			01/31		39.4		25.7
Steppes PC	22C11		12/5				
Spirit PC	22C12		5/15				
			5/30				

GT = Ground Truth measurement at SNOTEL sites

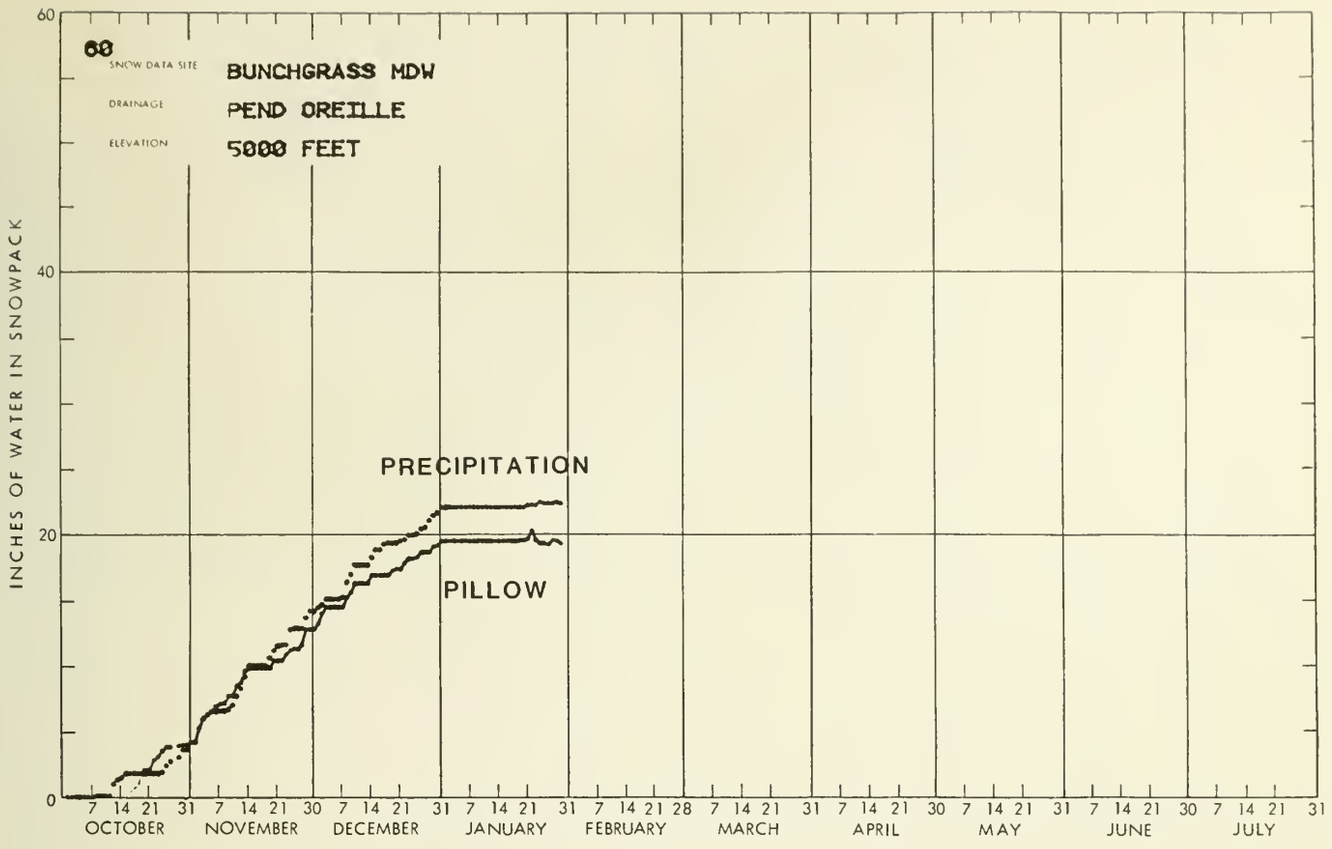
WSFB-X4-L

SNOTEL READINGS, FEB. 1, 1985 - APPENDIX 4

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average *
NISQUALLY RIVER							
Paradise Park	21C35	5500	12/31		47.4	42.2	
			01/31		49.0	49.1	
WHITE RIVER							
Corral Pass	21B13 GT	6000	12/31		11.6	12.7	
Morse Lake	21C17 GT	5400	12/31		27.2	27.5	
			01/31		30.6	32.9	
GREEN RIVER							
Cougar Mountain	21B42 GT	3200	12/31			14.5	10.5
			01/31			11.0	13.3
Stampede Pass GT	21B10	3960	12/31		30.2	24.4	19.7
			01/31		32.9	27.1	32.8
SNOQUALMIE RIVER							
Olallie Meadows East	21B55	3960	12/31				24.6
			01/31				33.7

GT = Ground Truth measurements at SNOTEL sites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20
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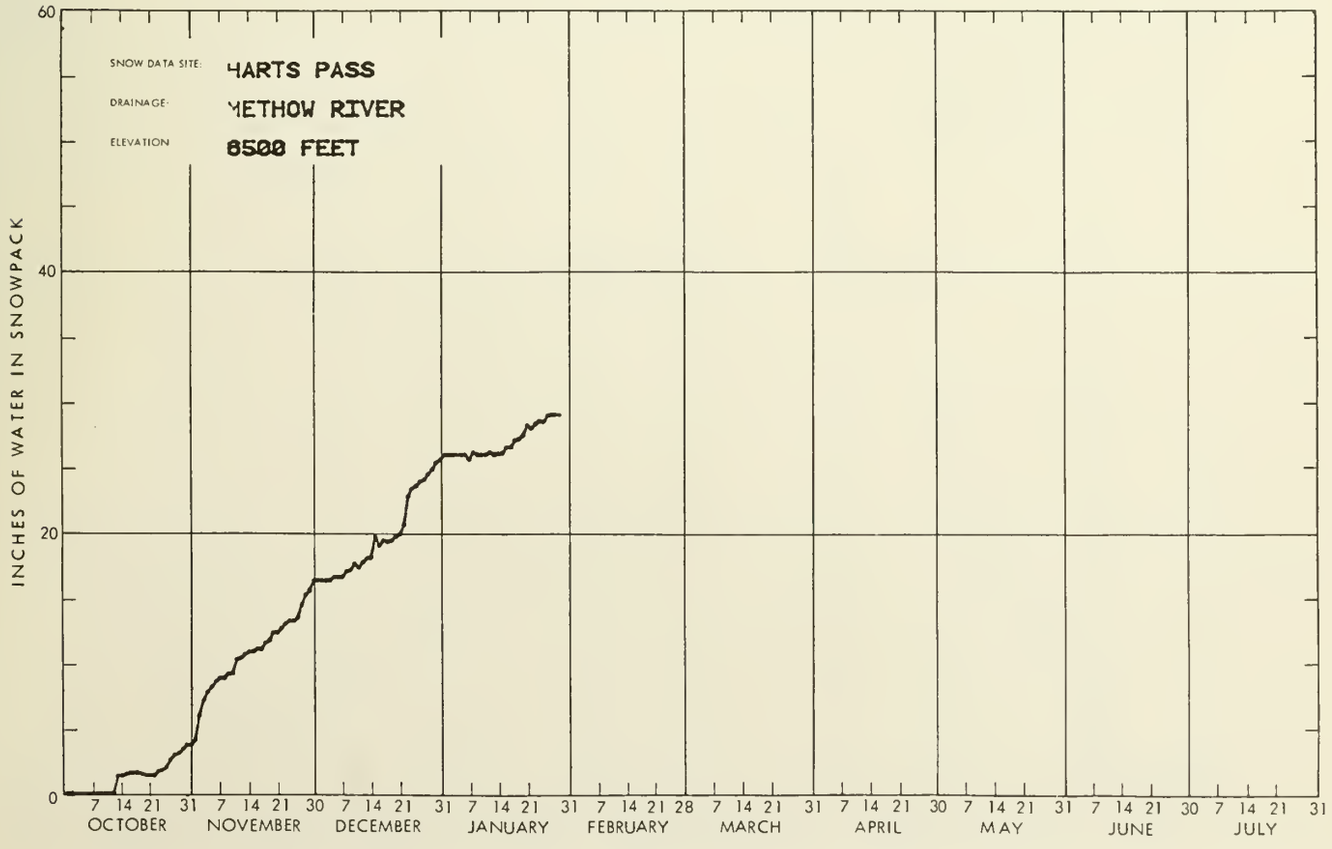
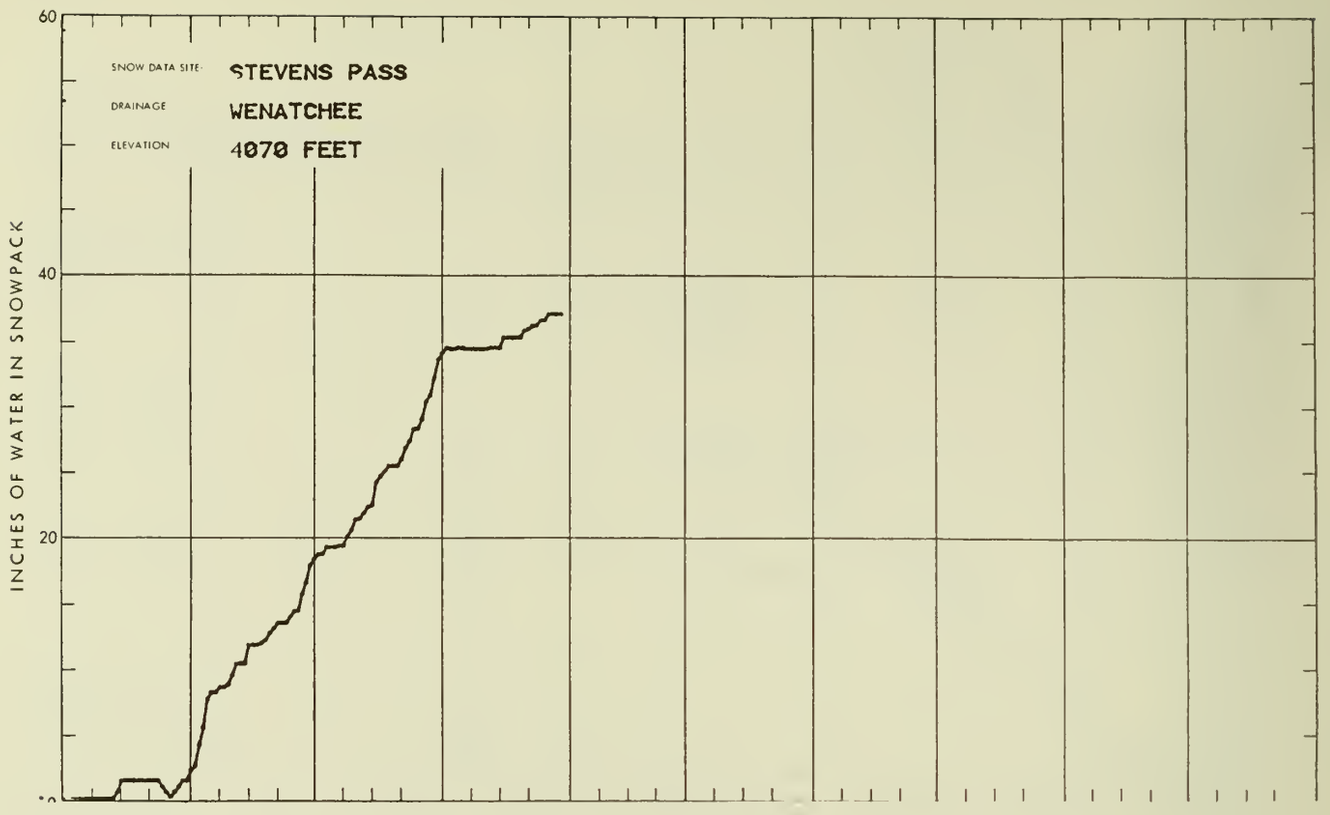
INCHES OF WATER IN SNOWPACK
60
SNOW DATA SITE
BUNCHGRASS MDW
DRAINAGE
PEND OREILLE
ELEVATION
5000 FEET
PRECIPITATION
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


60
40
20
0
INCHES OF WATER IN SNOWPACK
SNOW DATA SITE:
HARTS PASS
DRAINAGE:
METHOW RIVER
ELEVATION
6500 FEET
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

WSFB-X13C



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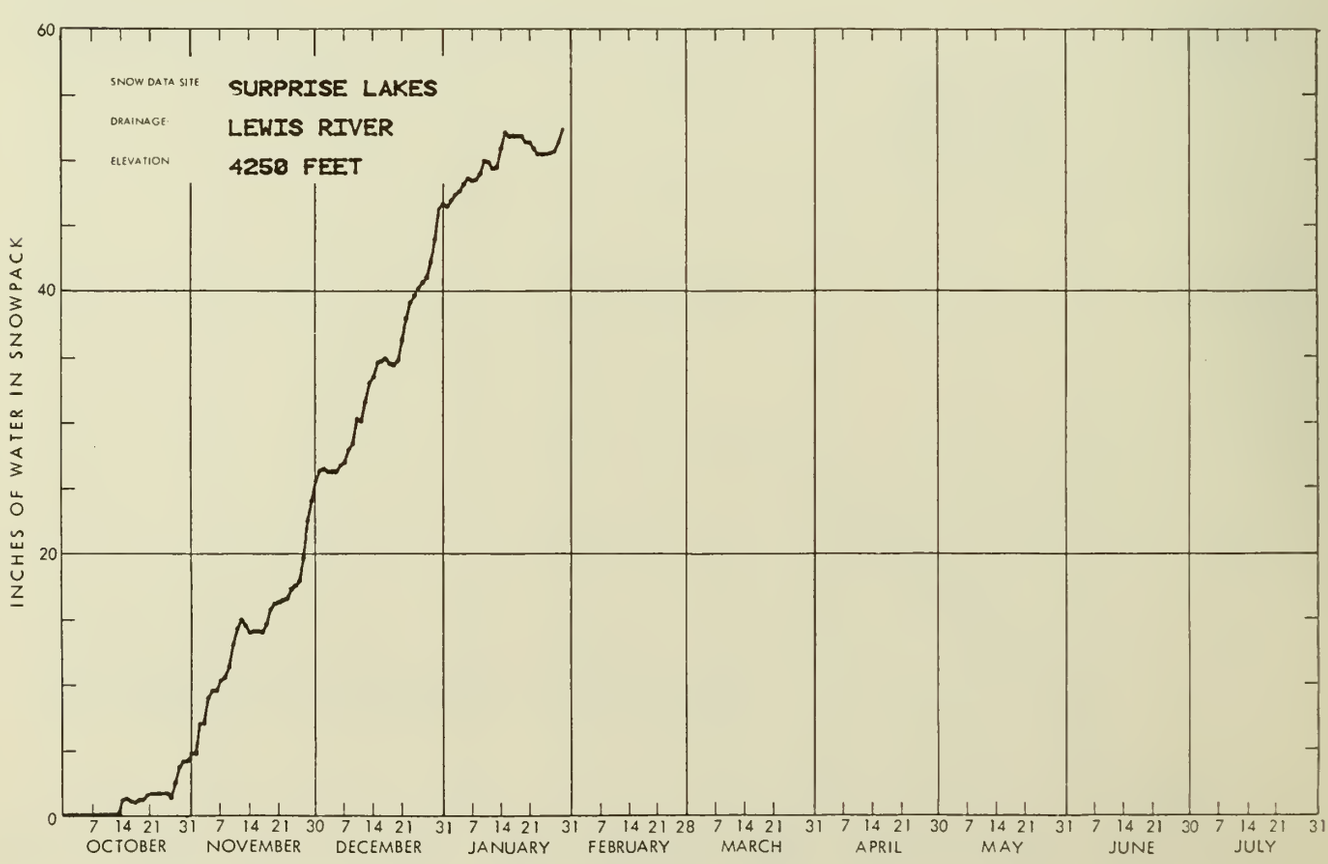
SNOW DATA SITE: SURPRISE LAKES
DRAINAGE: LEWIS RIVER
ELEVATION: 4250 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
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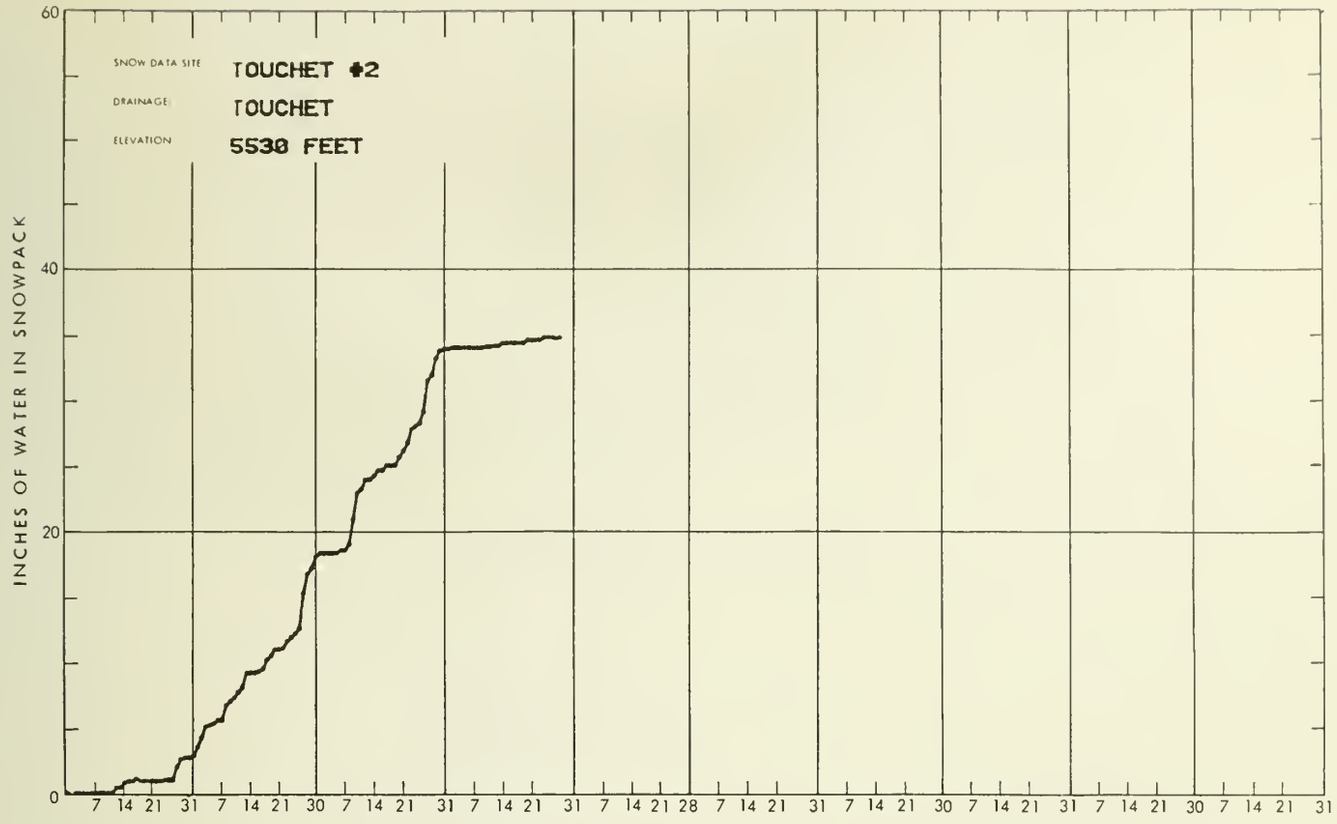
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

WSFB-X13C



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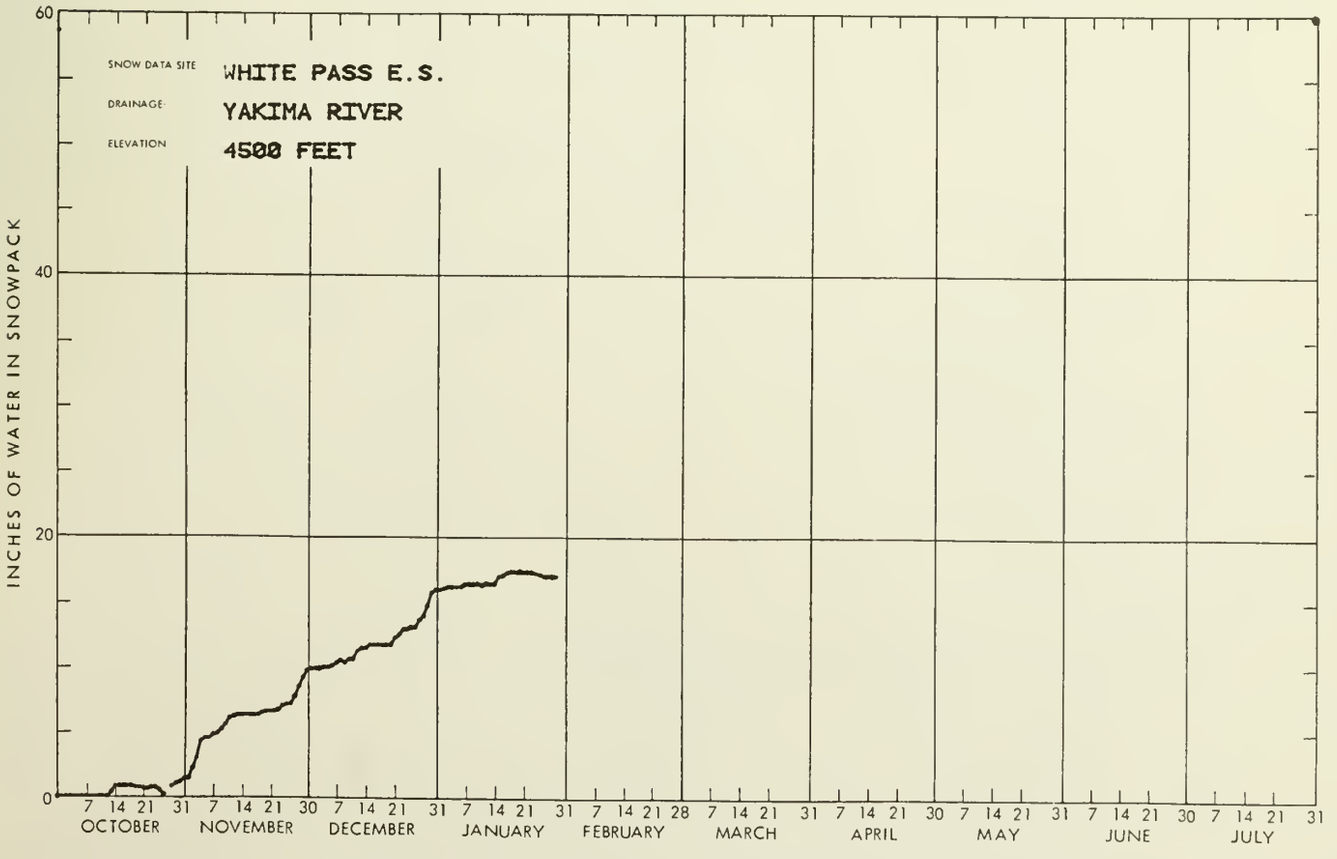

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Ministry of the Environment, Water
Investigations Branch, Victoria, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
Corps of Engineers
U.S. Department of Agriculture
Forest Service
U.S. Department of Commerce
NOAA, National Weather Service
U.S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Geological Survey
National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
ROOM 360, U.S. COURT HOUSE
SPOKANE, WASHINGTON 99201

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COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"The Conservation of Water begins with the Snow Survey"

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United States
Department of
Agriculture

**Soil
Conservation
Service**

Spokane,
Washington

Water Supply Outlook for Washington

as of MARCH 1, 1985

The Library of the

APR 4 1985

University of Illinois
at Urbana-Champaign

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: "Snow scene along trail to Mt. Hood test site snow course"

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P.O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	P.O. Box 98, Bozeman, Montana 59715
Nevada	P.O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4402 Federal Bldg., 125 South State St., Salt Lake City, Utah 84147
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P.O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 — for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 — for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 — and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.

WATER SUPPLY OUTLOOK FOR WASHINGTON

and

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

ISSUED BY

PETER C. MYERS
Chief
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

RELEASED BY

LYNN A. BROWN
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

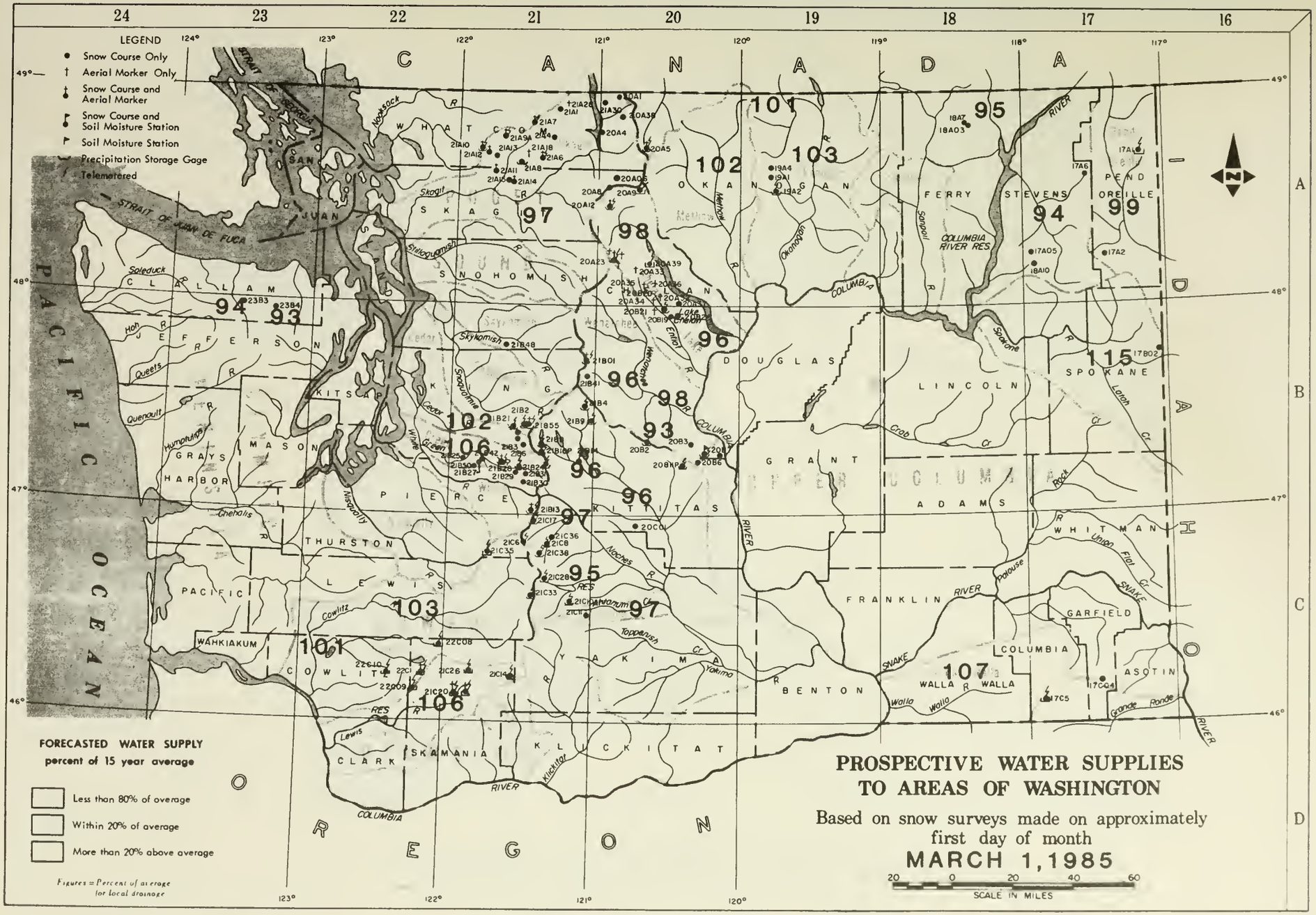
FORECASTS BY

SOIL CONSERVATION SERVICE
WATER SUPPLY FORECASTING STAFF, WNTC
PORTLAND, OREGON
and
NATIONAL WEATHER SERVICE
RIVER FORECAST CENTER
PORTLAND, OREGON

REPORT PREPARED BY

WILLIAM F. WELLER, Hydrologist
JOLA L. MICKELSEN, Secretary
SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201

MT-OL-220280


LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Moisture Station
Soil Moisture Station
Precipitation Storage Gage
Telemetered
FORECASTED WATER SUPPLY
percent of 15 year average
Less than 80% of average
Within 20% of average
More than 20% above average
Figures = Percent of average for local drainage
PROSPECTIVE WATER SUPPLIES
TO AREAS OF WASHINGTON
Based on snow surveys made on approximately first day of month
MARCH 1,1985
SCALE IN MILES
CANADA
OREGON
PACIFIC OCEAN
STRAIT OF JUAN DE FUCA
WHATCOM
SKAGIT
SNOHOMISH
CLALLAM
JEFFERSON
KITSAP
MASON
GRAYS HARBOR
PIERCE
KING
THURSTON
LEWIS
PACIFIC
WAHKIAKUM
COWLITZ
CLARK
SKAMANIA
KLICKITAT
YAKIMA
BENTON
FRANKLIN
GRANT
ADAMS
LINCOLN
DOUGLAS
OKANOGAN
FERRY
STEVENS
PEND OREILLE
SPOKANE
WHITMAN
GARFIELD
COLUMBIA
WALLA WALLA
ASOTIN
COLUMBIA RIVER RES.

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NAME	NUMBER	SEC	TWP	RANGE	ELEV
UPPER COLUMBIA DRAINAGE					
Pend Oreille River					
Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Kettle River					
Summit G. S.	18A7	20	39N	35E	4600
Spokane River					
Ragged Ridge	17B02	12	27N	45E	3333
Colville River					
Baird	17A6	19	36N	42E	3215
Stranger Mountain	17A5	26	31N	38E	4990
Toga	18A10	6	29N	38E	3370
Okanogan River					
Mutton Creek No. 1	19A1	30	37N	24E	5700
Mutton Creek No. 2	19A4	19	37N	24E	6000
Salmon Meadows	19A2SP	33	37N	24E	4500
Methow River					
Harts Pass	20A5SP	7	37N	18E	6500
Chelan Lake Basin					
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Mirror Lake	20A39	30	31N	18E	5600
Entiat River					
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Fox Camp	20A36a	17	30N	18E	6510
Pope Ridge	20B20	22	29N	18E	3540
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tommy Creek	20B21a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	20B2SP	35	22N	17E	4270
Stevens Pass	21B15P	14	26N	13E	4070
Trough #2	20B25SP	10	20N	20E	5310
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Stemilt Creek					
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20B7SP	30	21N	20E	4400
Yakima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Fish Lake	21B4SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grouse Camp	20B11SP	29	21N	19E	5385
Lake Cle Elum	21B14M	15	20N	14E	2200
Morse Lake	21C17SP	6	16N	11E	5400
Tunnel Avenue	21B8P	13	21N	11E	2450
White Pass (East Side)	21C28SP	2	13N	11E	4500

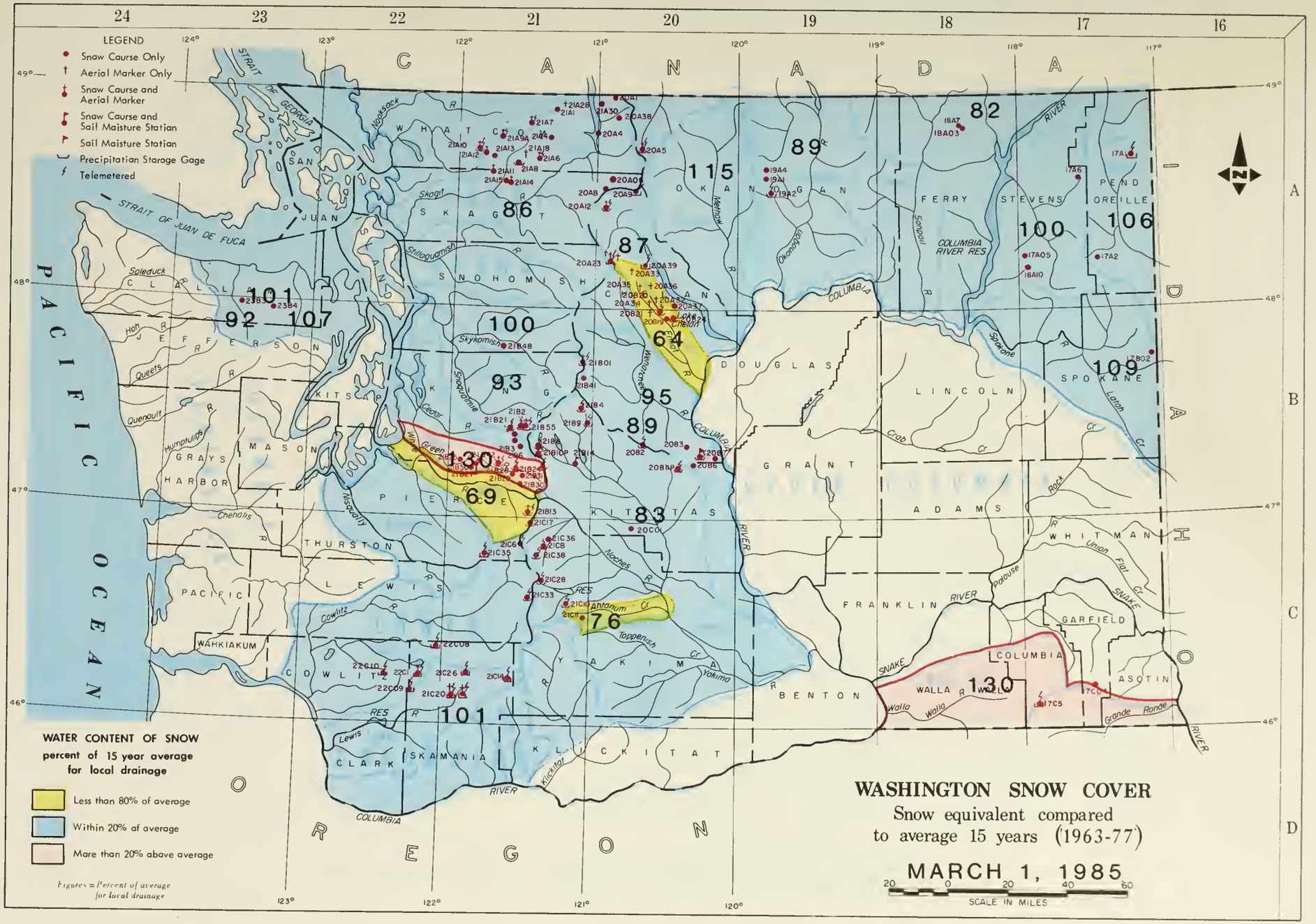
NAME	NUMBER	SEC	TWP	RANGE	ELEV
LOWER COLUMBIA DRAINAGE					
Asotin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Touchet River					
Touchet No. 2	17C5SP	6	7N	40E	5530
Lewis River					
June Lake	22C09SP	26	8N	5E	3200
Lone Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250
Cowlitz River					
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Potato Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280
PUGET SOUND DRAINAGE					
Nisqually River					
Paradise Park (New)	21C35SP	13	15N	8E	5500
White River					
Corral Pass	21B13SP	30	18N	11E	6000
Green River					
Airstrip	21B24P	18	20N	11E	1800
Charley Creek	21B25	27	21N	8E	1200
Cougar Mountain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21B2B	12	20N	8E	2100
Lester Creek	21B29	36	20N	10E	3100
Lynn Lake	21B50	22	20N	8E	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Stampede Pass	21B10SP	25	21N	11E	3860
Twin Camp	21B30	18	19N	11E	4100
Cedar River					
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21P	30	22N	10E	3300
Snoqualmie River					
Alpine Meadow	21B48	31	27N	9E	3500
Olallie Meadows	21B2P	19	22N	11E	3625
Olallie Meadows East	21B55SP	20	22N	11E	3700
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brown Top	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadows (New)	20A3B	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadows Cabins	20AB	29	36N	14E	1900
New Hozomeen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200

NAME	NUMBER	SEC	TWP	RANGE	ELEV
Baker River					
Dock Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Mount Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500
OLYMPIC PENINSULA					
Dungeness River					
Deer Park	23B4	1	28N	5W	5200
Elwha River					
Hurricane	23B3	36	29N	7W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow

USDA SCS FORT WORTH TEXAS 1983 M7-OL-22028C



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Rainy Pass	20A9SP	21	35N	17E	4780
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21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow

WATER SUPPLY OUTLOOK

State of Washington

MARCH 1, 1985

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

IMPORTANT NOTICE

The President's 1986 budget request to Congress calls for termination of the Snow Survey and Water Forecast activity within the U.S. Soil Conservation Service for fiscal policy reasons. If the President's budget request is enacted by Congress the Snow Survey Program will be eliminated by the end of fiscal year 1986. This action would conclude over 50 years of federally coordinated snow survey effort in the Western U. S.

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

There are only minor changes in the water supply forecasts for Washington for March. Supplies are expected to be average over the entire state. The forecasts vary from 92% on Icicle Creek to 115% of normal runoff on the Spokane River. The mountain snowpack was generally near average over most of Washington. Precipitation for February continued to be below average. Reservoir storage has not changed materially over the February 1st report. Below average temperatures have held streamflows on state streams to below normal.

COVER

March snow cover changed only slightly from those measured during the February 1st period. Snow cover is still showing slightly below average for the lower elevations in the Cascades. The higher elevation snow courses in the Cascades and the snow courses in the eastern portion of the state are near average to slightly above average. Two drainage areas in the state are above average, the Blue Mountain and the Green River drainages both at 130%. Ahtanun Creek and the Entiat River are below average with snow cover of 76% and 64%.

PRECIPITATION

February precipitation was below average over the state, with Northeastern Washington at 85%, Southeastern Washington at 85%, the Southwest Cascade at 91%. The Okanogan area at 64% of normal had the lowest amount of precipitation with 0.62 inches for February. The west side of the Cascades was also below average with the north having 81% and the south 70%.

Total winter precipitation (November-Feburary period) has been below average over the entire state. The Puget Sound area has received 42.28 inches of winter precip, 78% of normal. The Yakima area received 20.36 inches, 76% of normal. Precipitation in the Northeastern area was 100% of normal.

RESERVOIR STORAGE

Stored water supplies are fair to good within the irrigated sections of the state. Below normal temperatures have kept area streamflows very low thus making power companies draw from reservoir storage for winter demand. In the Yakima, irrigation reservoirs are storing 505,000 acre feet of water compared to the March 1 average of 702,500, or 72% of normal. The reservoirs in the Okanogan Irrigation District are near capacity. Lake Chelan at 159.900 acre-feet, is 68% of normal.

STREAMFLOW

February continued much like January. Below normal temperatures have retarded the snowmelt keeping streamflows low during the month over most of the state. Temperatures have been much below average with Omak 8 degrees below average, Yakima -7, Spokane -8, Walla Walla -6, and Seattle -4. Streams in the state had the following average flows for February; the Pend Oreille River at 41%, Spokane River at 28%, Yakima River at 43% and the Wenatchee River at 42%. The Columbia River at Birchbank had the nearest to average flow with 82%, while the Chelan River was the lowest with 21% of normal

STREAMFLOW FORECASTS - MARCH 1985

THE FOLLOWING SUMMARIZED RUNOFF FORECASTS ARE BASED PRINCIPALLY ON MOUNTAIN SNOW COVER AND ON THE ASSUMPTION THAT PRECIPITATION AND TEMPERATURE WILL BE NEAR AVERAGE FROM THE PRESENT TIME TO THE END OF THE FORECAST PERIOD. APPRECIABLE DEVIATIONS FROM NORMAL TEMPERATURE AND/OR PRECIPITATION WILL CORRESPONDINGLY MODIFY THESE FORECASTS. THESE FORECASTS ARE MADE AS A PRODUCT OF THE COOPERATIVE EFFORTS OF THE SOIL CONSERVATION SERVICE AND THE NATIONAL WEATHER SERVICE. STREAMFLOW FIGURES FOR 1982-1984 ARE PRELIMINARY AND SUBJECT TO REVISION.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
COLUMBIA RIVER SYSTEM	/1/						
COLUMBIA RIVER	42000	94	APR-SEPT	39200	43225	48575	44605
AT BIRCHBANK	33600	94	APR-JULY	30400	34569	38210	35705
	24465	94	APR-JUNE	20700	24281	27454	26027
COLUMBIA RIVER	63400	95	APR-SEPT	62500	46662	56425	66841
AT GRAND COULEE	53500	95	APR-JULY	51900	34933	43821	56169
	41800	95	APR-JUNE	39400	65970	32610	44036
COLUMBIA RIVER	70000	96	APR-SEPT	66300	44560	79386	72781
BL ROCK ISLAND	59500	97	APR-JULY	55600	58672	66629	61601
	47000	97	APR-JUNE	42200	69844	49348	48384
COLUMBIA RIVER	102000	101	APR-SEPT	107700	103682	118503	101000
AT THE DALLES	88000	102	APR-JULY	92700	88273	101631	86500
	71500	102	APR-JUNE	74600	70038	80122	70100
PEND OREILLE RIVER SYSTEM							
PEND OREILLE	15000	97	APR-SEPT	12980	12841	17721	15425
BL. BOX CANYON	13800	97	APR-JULY	11780	11482	16324	14156
	11900	97	APR-JUNE	9895	9226	13306	12227
KETTLE RIVER SYSTEM							
KETTLE RIVER	1750	96	APR-SEPT	2438	2709	2330	1829
NR LAURIER	1660	96	APR-JULY	2327	2534	2174	1738
	1520	96	APR-JUNE	2004	2251	1747	1581
COLVILLE RIVER	126	94	APR-SEPT	243	182	160	134
AT KETTLE FALLS	116	94	APR-JULY	221	161	161	123
	107	94	APR-JUNE	197	144	132	114

/1/ OBSERVER FLOW CORRECTED FOR STORAGE IN ANY OF THE FOLLOWING RESERVOIRS WHICH ARE ABOVE THE STATION: KOOTENAY LAKE, HUNGRY HORSE, FLATHEAD LAKE, PEND OREILLE LAKE, F.D. ROOSEVELT LAKE, LAKE CHELAN, COEUR D'ALENE LAKE, BROWNLEE, NOXON RESERVOIR AND PUMPAGE AT F. D. ROOSEVELT LAKE.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
SPOKANE RIVER SYSTEM							
SPOKANE RIVER	3290	115	APR-SEPT	2808	2243	2238	2848
AT POST FALLS/2/	3175	115	APR-JULY	2647	2067	2145	2754
OKANOGAN RIVER SYSTEM							
SIMILKAMEEN R.	1477	101	APR-SEPT	1214	1490	1638	1462
NR NIGHTHAWK	1379	101	APR-JULY	1116	1356	1491	1365
	1173	101	APR-JUNE	894	1155	1166	1161
OKANOGAN RIVER	1693	103	APR-SEPT	1688	2170	2046	1644
NR TONASKET	1541	103	APR-JULY	1492	1891	1712	1497
	1300	103	APR-JUNE	1179	1569	1306	1262
METHOW RIVER SYSTEM							
METHOW RIVER	1000	102	APR-SEPT	976	1354	1203	980
NR PATEROS	926	102	APR-JULY	886	1243	1120	908
	788	102	APR-JUNE	722	1094	918	773
CHELAN RIVER SYSTEM							
CHELAN RIVER	1154	96	APR-SEPT	1079	1261	1376	1203
AT CHELAN /3/	1012	96	APR-JULY	946	1104	1223	1055
	793	96	APR-JUNE	688	901	958	826
STEHEKIN RIVER	843	98	APR-SEPT	736		938	860
AT STEHEKIN	712	98	APR-JULY	608	727	800	727
	542	98	APR-JUNE	411	572	603	553
ENTIAT RIVER	235	100	APR-SEPT	231	292	282	235
NR ARDENVOIR	210	100	APR-JULY	207	263	258	213
	170	100	APR-JUN	152	221	206	172
WENATCHEE RIVER SYSTEM							
WENATCHEE RIVER	1220	96	APR-SEPT		GAGE ABANDONED		1270
NR PLAIN	1090	96	APR-JULY				1136
	860	96	APR-JUNE				899
WENATCHEE RIVER	1680	98	APR-SEPT	1541	1590	2013	1712
AT PESHASTIN	1515	98	APR-JULY	1385	1432	1791	1545
	1212	98	APR-JUNE	1022	1191	1429	1237
STEMILT BASIN	*130	94	MAY-SEPT				**138
NR WENATCHEE							
ICICLE CREEK	340	92	APR-SEPT		GAGE ABANDONED		**370
NR LEAVENWORTH	313	92	APR-JULY				**340
	250	93	APR-JUNE				**270

* THOUSANDS OF MINERS' INCHES.

** AVERAGE COMPUTED FOR 1963-1977.

/2/ FORECASTS MADE BY JERRY BEARD, SOIL CONSERVATION SERVICE, BOISE, IDAHO. OBSERVED FLOW CORRECTED FOR STORAGE IN COEUR D'ALENE LAKE.

/3/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE CHELAN.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
YAKIMA RIVER SYSTEM							
YAKIMA RIVER	133	96	APR-SEPT	133	109	152	139
NR MARTIN /4/	123	96	APR-JULY	123	96	138	128
	107	96	APR-JUNE	107	81	121	111
YAKIMA RIVER	905	96	APR-SEPT	917	733	1100	943
AT CLE ELUM /5/	820	96	APR-JULY	825	659	1010	854
	705	96	APR-JUNE	678	589	883	734
YAKIMA RIVER	1970	94	APR-SEPT	2069	2221	2434	2096
NR PARKER /6/	1784	94	APR-JULY	1779	1958	2193	1898
	1567	94	APR-JUNE	1491	1722	1909	1667
KACHESS RIVER	117	97	APR-SEPT	119	105	134	121
NR EASTON /7/	112	97	APR-JULY	108	96	126	115
	98	97	APR-JUNE	91	84	110	101
CLE ELUM RIVER	444	96	APR-SEPT	442	421	516	463
NR ROSLYN /8/	405	96	APR-JULY	397	381	468	422
	340	96	APR-JUNE	310	324	392	353
BUMPING RIVER	138	97	APR-SEPT	137	137	161	142
NR NILE /9/	125	97	APR-JULY	127	128	147	129
	104	97	APR-JUNE	102	109	123	107
AMERICAN RIVER	120	97	APR-SEPT	114	157	140	124
NR NILE	110	97	APR-JULY	104	144	130	113
	91	97	APR-JUNE	81	120	109	94
TIETON RIVER/10/	234	95	APR-SEPT	245			246
AT TIETON DAM	197	95	APR-JULY	198			207
	157	95	APR-JUNE	149			165
NACHES RIVER	832	96	APR-SEPT	812	966	998	867
NR NACHES /11/	753	96	APR-JULY	732	881	945	784
	640	96	APR-JUNE	601	770	775	667
AHTANUM CREEK	45	96	APR-SEPT				47
NR TAMPICO /12/	41	96	APR-JULY				43
	36	97	APR-JUNE				37

/4/ OBSERVED FLOW CORRETED FOR STORAGE IN LAKE KEECHELUS.
/5/ OBSERVED FLOW CORRECTED FOR STORAGE IN KEECHELUS, KACHESS, AND CLE ELUM LAKES AND DIVERSION BY KITTITAS CANAL.
/6/ OBSERVED FLOW CORRECTED FOR STORAGE IN KEECHELUS, KACHESS, CLE ELUM, BUMPING, AND RIMROCK LAKES AND DIVERSIONS BY ROSA, UNION GAP, NEW RESERVATION, OLD RESERVATION AND SUNNYSIDE CANALS.
/7/ OBSERVED FLOW CORECTED FOR STORAGE IN LAKE KACHESS.
/8/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE CLE ELUM.
/9/ OBSERVED FLOW CORRECTED FOR STORAGE IN BUMPING LAKE.
/10/ OBSERVED FLOW CORRECTED FOR STORAGE IN RIMROCK LAKE.
/11/ OBSERVED FLOW CORRECTED FOR STORAGE IN BUMPING AND RIMROCK LAKES AND DIVERSIONS BY TIETON, SELAH VALLEY, WAPATOX CANALS AND CITY OF YAKIMA.
/12/ OBSERVED FLOW OF NORTH AND SOUTH FORKS (COMBINED).

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
LOWER COLUMBIA RIVER SYSTEM							
MILL CREEK	18.7	107	APR-SEPT	23.46	13.48	24.62	**17.50
AT WALLA WALLA	18.4	106	APR-JULY	23.08	13.39	24.48	**17.33
	18.1	106	APR-JUNE	22.24	13.36	21.63	**17.15
LEWIS RIVER	1320	106	APR-SEPT	1284	1255	1170	1249
AT ARIEL /13/	1150	106	APR-JULY	1141	1046	1030	1086
	1019	106	APR-JUNE	1012	821	927	961
COWLITZ RIVER	2100	103	APR-SEPT	2080	1935	4936	2038
BL MAYFIELD DAM	1830	103	APR-JULY	1860	1754	1963	1778
/14/	1550	103	APR-JUNE	1570	1424	1722	1502
COWLITZ RIVER	2700	101	APR-SEPT	3770	2618	2655	2673
AT CASTLE ROCK	2346	101	APR-JULY	3370	2195	2363	2323
/14/	2000	101	APR-JUNE	2860	1739	2080	1980
OLYMPIC PENINSULA							
DUNGENESS RIVER SYSTEM							
DUNGENESS RIVER	149	93	APR-SEPT		197	196	160
NR SEQUIM	121	93	APR-JULY		158	163	130
	90	93	APR-JUNE		117	117	97
ELWHA RIVER SYSTEM							
ELWHA RIVER	520	94	APR-SEPT	469	538	607	**553
NR PORT ANGELES	430	95	APR-JULY	383	448	512	**454
PUGET SOUND							
SKAGIT RIVER SYSTEM							
SKAGIT RIVER	2400	95	FEB-AUG	1556	1995	2248	**2532
AT NEWHALEM /15/	2285	97	APR-SEPT	1378	1531	1880	**2356
	1910	97	APR-JULY	997	1061	1439	**1972
	1440	97	APR-JUNE	621	698	1004	**1485
GREEN RIVER SYSTEM							
GREEN RIVER BL	335	106	APR-SEPT	275	190	227	**316
HOWARD HANSEN DAM	300	106	APR-JULY	243	145	195	**284
/16/	270	105	APR-JUNE	217	107	174	**256
CEDAR RIVER SYSTEM							
CEDAR RIVER NR CEDAR FALLS	95	102	APR-SEPT	86	66	80	**93

/13/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE MERWIN, YALE AND SWIFT RESERVOIRS.

/14/ OBSERVED FLOW CORRECTED FOR STORAGE IN RIFFE LAKE AND MAYFIELD RESERVOIR.

/15/ OBSERVED FLOW CORRECTED FOR STORAGE IN DIABLO, ROSS AND GORGE RESERVOIRS.

/16/ OBSERVED FLOW CORRECTED FOR STORAGE IN HOWARD HANSON DAM.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of washington stream basins presents the water content of the snow about March 1, 1985, as percent of the same date in 1984 and 1983 and average of record.

Tributary Basin	No. of Courses	1985 Snow Water Expressed as percent of 1984	Average 1961-80
		UPPER COLUMBIA BASIN	
Pend Oreille	11	132	106
Kettle	10	86	82
Colville	3	115	100
Spokane	7	153	109
Okanogan	30	116	89
Methow	6	102	86
Chelan	5	97	87
Entiat	9	59	64
Wenatchee	9	94	95
Yakima	14	96	83
Ahtanum	2	86	76
		LOWER COLUMBIA BASIN	
Mill Creek	1	130	130
Cowlitz	2	119	101
		PUGET SOUND	
White	2	73	69
Green	10	198	130
Snoqualmie	2	148	93
Skykomish	4	136	100
Skagit	17	127	86
Baker	9	128	98
		OLYMPIC PENNINSULA	
Morse	1	128	101
Elwha	1	144	92
Dungeness	1	169	107

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	1985	Measured (March) 1984	1983	Normal*
		COLUMBIA				
Spokane	Coeur d'Alene Lake	225.1	19.8	106.5	222.2	121.6
Columbia	Franklin D. Roosevelt Lake	5232.0	2694.0	4497.6	4470.7	2681.2
Columbia	Banks Lake	714.9	674.8	902.6	712.2	621.3
Okanogan	Conconully Reservoir	13.0	12.4	13.0	13.0	6.7
Okanogan	Conconully Lake	10.5	10.2	10.4	10.4	7.5
Chelan	Lake Chelan	676.1	159.9	340.8	233.3	235.5
		YAKIMA				
Yakima	Keechelus Lake	157.8	83.5	133.5	100.3	105.4
Kachess	Kachess Lake	239.0	154.4	202.1	207.2	183.0
Cle Elum	Lake Cle Elum	436.9	179.1	322.0	309.6	280.2
Bumping	Bumping Lake	33.7	3.8	13.7	6.8	8.7
Tieton	Rimrock Lake	198.0	84.2	150.8	135.0	125.3
		PUGET SOUND				
Skagit	Ross Reservoir	1404.1	684.3	1062.2	856.2	894.0
Skagit	Diablo Reservoir	90.6	85.0	38.1	89.0	85.2
Skagit	Gorge Reservoir	9.8	7.9	7.8	8.4	8.1

1/ Pased on Active Storage
* 15-yr. Average 1963-1977

PRECIPITATION 1/

Division Average Observations and Departures

Drainage Divisions	Fall Sept-Oct 1984 Observed	Fall Departures 2/	Winter Nov. 1984 - Mar. 1985 Observed	Winter Departures 2/
Northeastern Wash	1.83	-0.65	9.11	-0.04
Southeastern Wash	2.22	-0.29	9.50	-0.39
East Slope Cascade	3.24	-1.51	20.36	-6.50
North Central Wash	1.54	-0.05	5.81	-0.55
Northwest Cascade	11.98	-1.23	42.28	-12.01
Southwest Cascade	8.89	-4.59	30.20	-9.41

Northeastern Washington - Lower Spokane, Colville, Sanpoil, and Lower Kettle Drainages.

Southeastern Washington - Touchet, Tucannon, and Palouse Drainages

East Slope Cascades - Yakima, Wenatchee, and Chelan Drainages

North Central Washington - Methow and Okanogan Drainages

Northwest Slope Cascades - Puget Sound Drainages

Southwest Slope Cascades - Lower Columbia Drainages

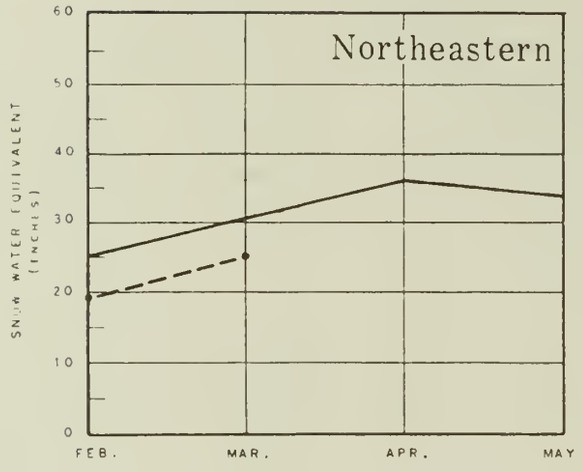
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service

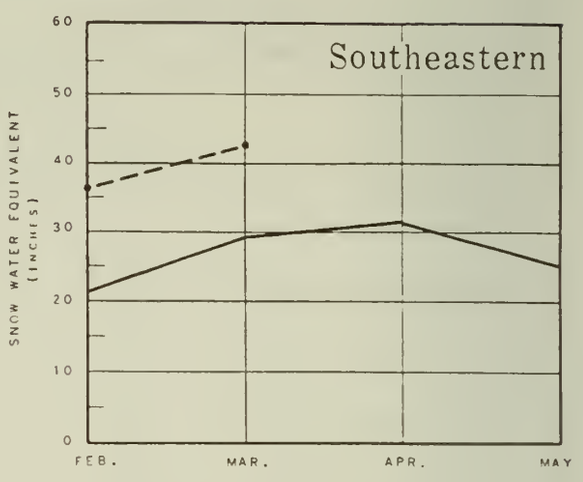
2/ - Departure from 15-year (1958-1972) drainage division average

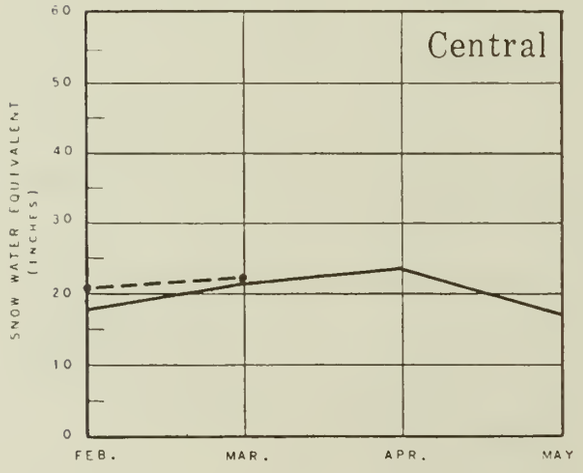
WASHINGTON SNOW COVER

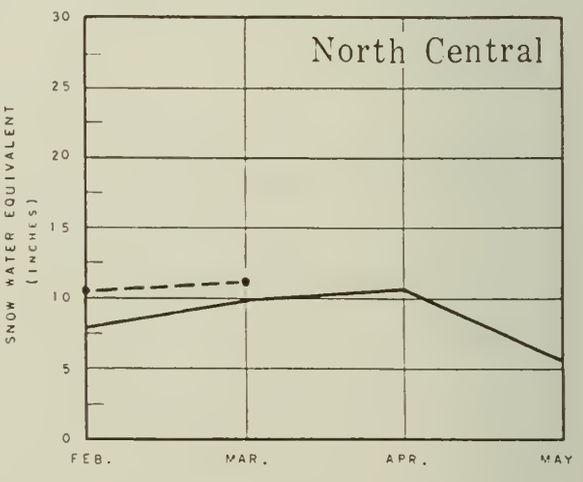
1985

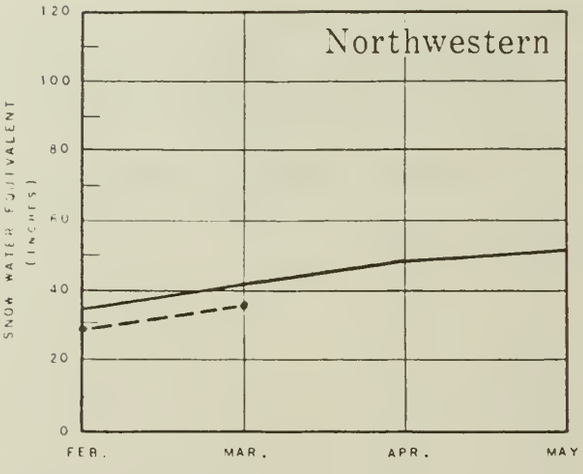
DRAINAGE AREAS

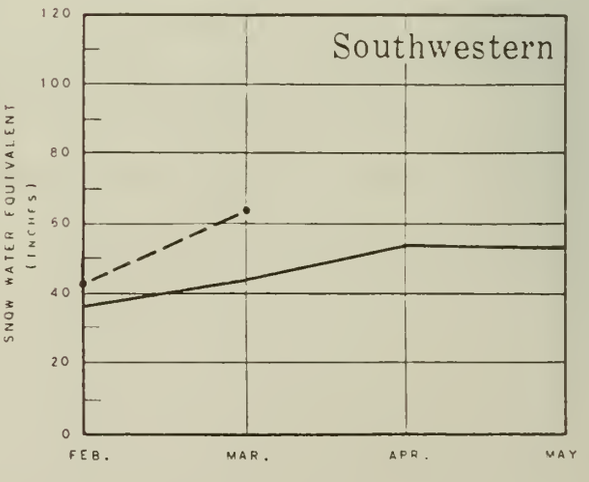












Average ———
1985 – – – –

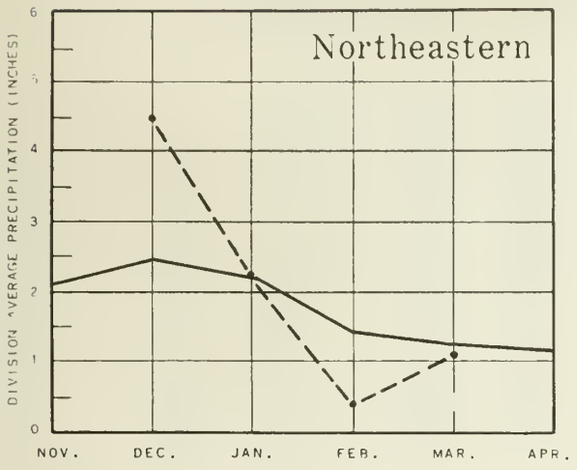
Selected Snow Survey Courses by Soil Conservation Service

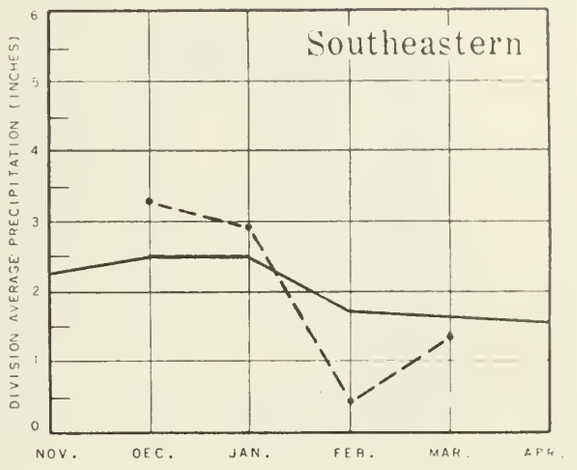
M7-L-220286

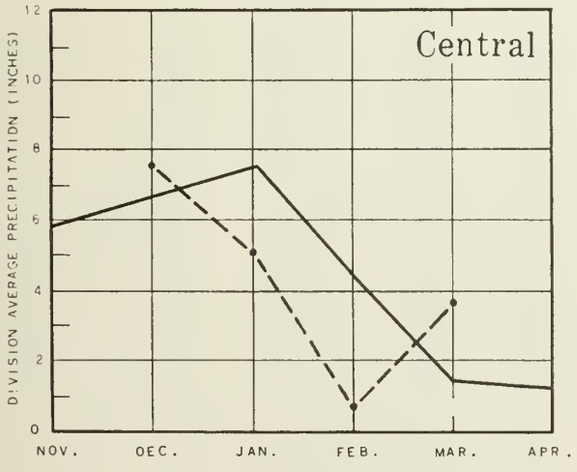
WASHINGTON VALLEY PRECIPITATION

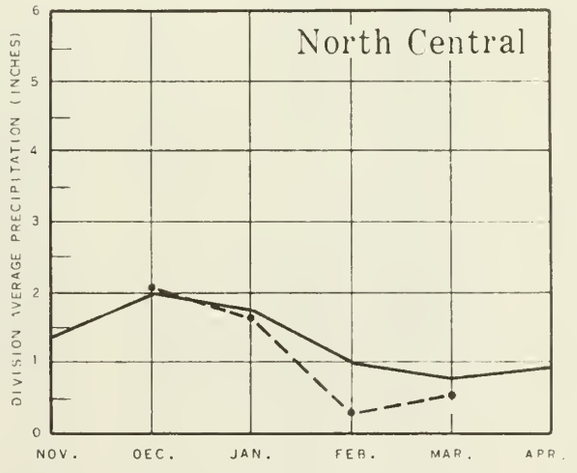
1985

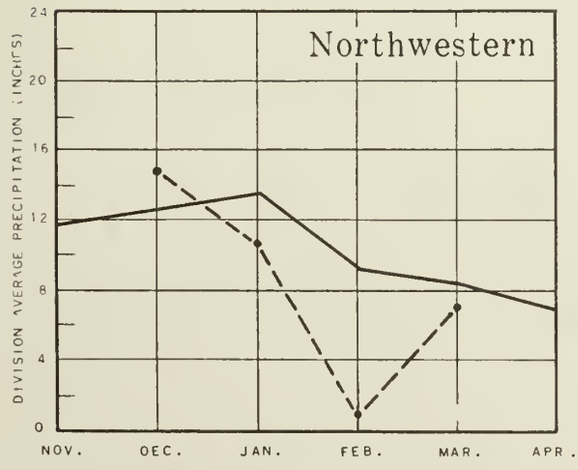
DRAINAGE AREAS

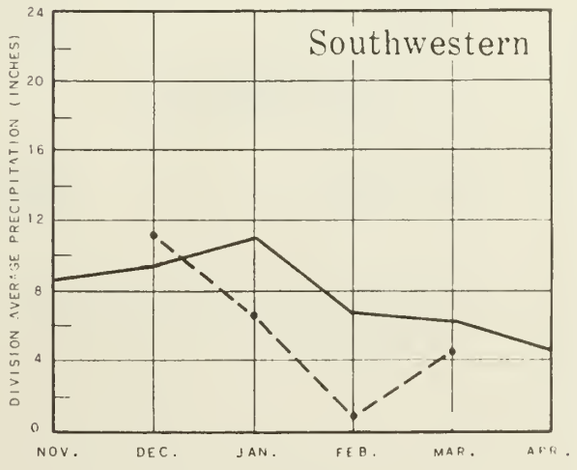












Average ———
1985 – – – –

Preliminary Analysis by National Weather Service

NOTE: Precipitation to beginning of the month.

M7-L-22028H

WSFR-X4-L

SNOW DATA TO MARCH 1, 1985 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #

UPPER COLUMBIA DRAINAGE

PEND OREILLE RIVER

Benton Meadow	16A02	2344	2/27	30	10.1	5.0	6.3
Benton Spring	16A03	4900	2/27	60	20.3	18.5	17.3
Boyer Mtn	17A02	5250	3/04	66	23.3	20.9	22.6
Bunchgrass Meadow	17A01	5000	3/05	73	23.9		10.0
Chewelah	17A04	4925	3/01	51	14.7	13.4	17.2
Hoodoo Basin	15C10	6000	3/01	117	48.2	33.2	44.6
Hoodoo Creek	15C01	5900	3/01	108	42.1	30.0	41.8
Lookout	15B02	5250	2/25	98	34.5	19.2	30.4
Nelson	2D04CA	3050	2/28	48	15.7	10.2	14.5
Schweitzer Bowl	16A06	4500	3/01	72	26.5	19.5	27.4
Schweitzer Ridge	16A05	6100	3/01	102	39.8	34.6	40.2

KETTLE RIVER

Barnes Creek	2B06CA	5300	2/25	58	16.8	16.0	17.5
Big White Mtn.	2E03CA	5500	3/02	50	14.5	15.4	17.0
Butte Creek	18A03	4070	2/27	29	7.1	10.6	8.6
Carmi	2E02CA	4100	3/03	18	3.8	5.5	6.2
Farron #1	2B02CA	4000	2/28	38	12.2		12.4
Farron #2	2B02ACA	4000	Not Measured				
Goat Creek	18A04	3595	2/27	23	4.3	8.1	6.6
Monashee Pass	2E01CA	4500	2/25	42	11.0	10.7	12.4
Summit G.S.	18A05	2150	2/27	27	6.7	9.5	7.3
Trapping Creek Lower	2E05CA	3050	3/03	14	3.4	5.0	5.4
Trapping Creek Upper	2E04CA	4450	3/02	30	6.2	7.2	9.3

COLVILLE RIVER

Baird	17A06	3215	2/24	36	8.9	9.0	7.0
Chewelah	17A04	4925	2/24	51	14.7	13.4	17.2
Togo	18A10	3370	2/24	40	10.7	7.5	10.2

OMAK LAKE, TWIN LAKES

Mission	19A11	1150	2/26	22	5.5		
Twin Lake	18A11	2700	2/27	40	7.8		
Mount Tolman	18A12	2000	2/15	19	4.4		

Average based on 1961-1980 averages
sp SNOTEL data

SNOW DATA TO MARCH 1, 1985 - APPENDIX 2

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Last Year	Average #
SPOKANE RIVER							
Above Burke	15B08	4100	2/25	72	23.9	12.0	19.8
4th of July Summit	16B03	3100	2/27	47	14.9	8.6	8.5
Lookout	15B02	5250	2/25	98	28.0	19.2	30.4
Lost lake	15B14A	6000	2/26	136	50.0	32.4	48.5
Mosquito Ridge	16A04	5110	2/27	94	36.2	22.4	34.1
Sherwin	16C01	3200	3/01	46	14.2	11.8	13.0
Sunset	15B09A	5600	2/26	76	26.4	24.6	28.6
NEWMAN LAKE							
Ragged Ridge	17B02	3333	2/28	41	14.0	2.8	New
OKANOGAN RIVER							
Aberdeen Lake	1F01CA	4300	2/27	22	5.1	5.2	6.0
Blackwall Peak	2G03CA	6250	3/01	76	26.1	20.7	30.7
Brenda Mine	2F18CA	4800	2/28	39	11.6E	10.9	11.9
Brookmere	1C01CA	3200	2/28	34	8.1	4.9	8.9
Enderby	1F04CA	6250	2/26	68	25.9	26.4	25.2
Esperon Creek Lower	2F15CA	4400	Not Measured				
Esperon Creek Middle	2F15CA	4700	" "				
Esperon Creek Upper	2F13CA	5400	" "				
Grayback Reservoir	2F08CA	5225	2/27	28	6.8	7.8	7.9
Hamilton Hill	2G06CA	4900	2/28	39	12.6	7.1	14.6
Harts Pass	20A05A	6500	2/27	89	31.2	29.1	38.8
Isintok Lake	2F11CA	6300	2/24	21	5.5	3.9	7.3
Lost Horse Mountain	2G04CA	7000	2/28	33	7.9	4.3	8.3
McCulloch	2F03CA	4200	2/28	24	6.0	5.2	6.6
Missezula Mtn.	2G05CA	5100	2/26	35	9.4	4.7	9.3
Mission Creek	2F05CA	6000	2/27	51	15.7	16.5	17.4
Monashee Pass	2E01CA	4500	2/25	42	11.0	10.7	12.4
Mount Kobau	2F12CA	5960	2/28	36	10.0	11.0	10.1

Average based on 1961-1980 averages
s SNOTEL data

WSFB-1-L

SNOW DATA TO MARCH 1, 1985 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Last Year	Average #
OKANOGAN RIVER (CONT.)							
Mutton Creek No. 1	19A01	5700	2/25	35	10.1	11.0	11.8
Mutton Creek No.2 SP	19A11	6000	Not Measured				New
Nickel Plate	2G02CAN	6200	2/26	29	7.8	3.9	7.8
Oyama Lake	2F19CAN	4400	2/27	25	6.5	5.2	6.6
Postill Lake	2F07CAN	4500	2/28	28	6.2	6.3	7.6
Rusty Creek	19A03	4000	2/28	23	4.1	7.0	6.6
Salmon Meadows	19A02	4500	2/28	28	6.5	9.6	9.3
Silver Star Mountain	2F10CAN	6050	2/24	71	23.9	21.7	24.4
Summerland Reservoir	2F02CAN	4200	2/24	29	8.7	7.1	9.0
Sunday Summit	2G01CAN	4300	2/27	22	6.3	2.4	5.8
Trout Creek	2F01CAN	4700	2/26	29	7.1	4.0	7.0
Vaseux Creek	2F20CAN	4600	2/26	24	5.4	8.3	6.2
White Rocks Mountain	2F09CAN	6000	Not Measured			20.7	20.2
METHOW RIVER							
Harts Pass	20A05A	6500	2/27	89	31.2	29.1	38.8
Mutton Creek No. 1	19A01	5700	2/25	35	10.1	12.0	11.8
Mutton Creek No. 2 SP	19A11	6000	Not Measured				12.4
Rusty Creek	19A03	4000	2/28	23	4.1	7.0	6.6
Salmon Meadows	19A02	4500	2/28	28	6.5	9.3	9.3
CHELAN LAKE BASIN							
Cloudy Pass +	20A22	6500	2/25	20	7.1		35.2
Little Meadows +	20A24a	5275	2/22	105	34.6		37.5
Lyman Lake	20A23	5900	2/25	116	40.0	46.2	47.5
Mirror Lake	30A39	5600	2/25	66	23.2	24.8	20.0
Park Creek Ridge	20A12	4600	2/25	97	37.0	33.8	43.1
Rainy Pass	20A09	4780	2/27	83	28.8	14.6	35.7

Average based on 1961-1980 averages
+ Aerial stadia observation
sp SNOTEL data

WSFB-84-L

SNOW DATA TO MARCH 1, 1985 - APPENDIX 4

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and or SNOW COURSE			Date of Survey	Snow Depth (inches)	Water Content (inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
ENTIAT RIVER							
Brief	20B19	1600	2/28	19	4.9	5.8	7.6
Entiat Meadows +	20A33	4540	2/26	74	27.4	32.6	57.7
Entiat River Trail +	20A34	3325	2/26	39	12.5	14.4	22.1
Fox Camp +	20A36	6510	2/26	93	35.3	41.0	52.3
Pope Ridge	20B20	3450	2/27	46	14.7	15.8	18.2
Pugh Ridge +	20A32	6725	2/26	49	16.7	23.4	32.9
Shady Pass	20A37	6200	2/27	55	18.9	21.4	24.1
Snow Brushy +	20A35	3910	2/26	87	31.3	29.8	35.3
Tommy Creek +	20B21	4900	2/26	47	14.6	13.6	25.7
WENATCHEE RIVER							
Berne Mill Creek	21B23	3170	2/28	70	25.0	18.2	25.5
Berne Mill Creek SP	21B41	3240	2/28	66	22.8	13.8	23.9
Blewett Pass No. 2	20B02	4270	2/26	48	16.3	11.7	14.9
Chiwaukum G. S.	20B16	1810	2/28	28	9.0	8.9	13.0
Lake Wenatchee	20B05	1970	Watershed Logged		Discontinued		
Lyman Lake	20A23	5900	2/25	116	40.0	46.2	47.5
Merritt	20B18	2140	2/28	37	14.7	6.4	15.8
Stevens Pass	21B01	4070	2/28	83	32.8	23.1	34.0
Stevens Pass Sand Shed	21B45	3700	2/28	83	32.8	23.1	34.0
COLOCKUM CREEK							
Trough #2(SP)	20B25	5310	3/01		8.1sp	4.1	9.5

+ Aerial stadia observation
# Average based on 1961-1980 averages
sp SNOTEL data

SNOW DATA TO MARCH 1 , 1985 - APPENDIX 5

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #
SQUILCHUCK CREEK							
Beehive Springs	20B03	4400	3/01	22	6.4	6.1	8.3
Scout-a-Vista	20B04	3400	Not Measured				
STEMILT CREEK							
Stimelt Slide	20B06	5000	3/01	36	10.9		13.4
Upper Wheeler	20B07	4400	3/01	24	6.9	11.0	9.9
YAKIMA RIVER							
Ahtanum R.S.	21C11	3100	2/25	23	6.7	7.2	6.9
Big Boulder Creek	21B09	3200	2/26	55	18.0	13.0	18.5
Blewet Pass No. 2	20B02	4270	2/26	41	14.3	11.7	14.9
Bumping Lake Old	21C08	3450	2/22	50	14.0	11.4	18.5
Bumping Lake New	21C36	3400	2/22	57	18.0	13.7	19.5
Cayuse Pass	21C06	5300	2/26	138	57.9		56.3
Colockum Pass	20B09	5370	2/28	43	13.5	16.7	15.0
Corral Pass	21B13	6000	Not Measured			31.2	34.0
Fish Lake	21B04	3371	2/26	75	28.0	25.0	29.8
Green Lake	21C10	6000	2/25	74	31.7	25.6	29.8
Grouse Camp	20B11	5385	2/26	44	14.0	16.4	15.9
Lake Cle Elum	21B14	2200	2/25	26	8.6	3.4	8.4
Morse Lake	21C17	5400	3/03	82	32.1	46.7	46.0
Olallie Meadows	21B02	3625	2/28	100	42.0	25.9	41.5
Stampede Pass	21B10	3860	3/01	99	41.5sp	25.8	31.5
Tunnel Avenue	21B08	2450	2/25	54	18.0	12.8	20.9
White Pass E. Side	21C28	4500	2/23	65	21.0	20.5	23.1

Average based on 1961-1980 averages
sp SNOTEL Reading

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SNOW DATA TO MARCH 1, 1985 - APPENDIX 6

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average
AHTANUM CREEK							
Ahtanum R. S.	21C11	3100	2/25	23	6.7	7.2	6.9
Green Lake	21C10	6000	2/25	74	31.7	25.6	29.8
LOWER COLUMBIA DRAINAGE							
MILL CREEK							
High Ridge SP	18D19	4890	2/28	76	28.8sp	0.0	
Touchet # 2 SP	17C55	5530	3/01	98	38.7sp		24.0
COWLITZ RIVER							
Cayuse Pass	21C06	5300	2/26	115	42.4	58.9	69.1
White Pass E. Side	21C28	4500	2/23	65	21.0	20.5	23.1
PUGET SOUND DRAINAGE							
WHITE RIVER							
Cayuse Pass	21C06	5300	2/26	115	42.4	58.9	69.1
Corral Pass	21B13	6000	Not Measured				
Morse Lake	21C17	5400	3/03	82	32.1	46.7	46.0
GREEN RIVER							
Airstrip	21B24	1800	3/02	15	2.0	0.0	4.6
Charley Creek	21B25	1200	3/02	0	0.0	0.0	1.0
Cougar Mountain	21B42	3200	3/01		30.2E	12.2	19.5
Grass Mtn. No. 2	21B27	2900	3/02	48	14.7	5.3	16.9
Grass Mtn. No. 3	21B28	2100	3/02	28	8.8	0.0	4.8
Lester Creek	21B29	3100	3/02	66	21.6	10.0	20.6
Lynn Lake	21B50	4000	3/02	80	35.5	11.5	15.6
Sawmill Ridge	21B31	4700	3/02	95	39.0	20.8	31.9
Stampede Pass	21B10	3860	3/01	99	41.5	38.0	36.2
Twin Camp	21C30	4100	3/02	74	29.8	16.3	21.9

Average based on 1961-1980 averages
sp SNOTEL Reading

WSFB-X4-L

SNOW DATA TO MARCH 1, 1985 - APPENDIX 7

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Last Year	Average #
SNOQUALMIE RIVER							
Olallie Meadows	21B02	3960	2/28	100	42.0	25.9	41.5
SKYKOMISH RIVER							
Stevens Pass	21B01	4070	2/28	112	44.5	29.8	46.7
Stevens Pass Sand Shed	21B45	3700	2/28	83	32.8	23.1	34.0
SKAGIT RIVER							
Beaver Creek Trail	21A04	2200	2/27	38	11.5	6.0	13.5
Beaver Pass	21A01	3680	2/26	71	22.5	16.8	26.6
Brown Top Ridge	21A28	6000	2/26	130	49.0	44.4	56.1
Devils Park	20A04	5900	2/27	92	32.0	14.8	39.6
Freezeout Creek Trail	20A01	3500	2/26	42	12.5	6.6	11.8
Freezeout Meadow	20A38	5040	2/26	73	23.4	17.4	36.3
Granite Creek	21A29	3500	2/27	53	16.4	10.2	19.2
Harts Pass	20A05A	6500	2/27	89	31.2	29.1	38.8
Klesilkwa	3D03ACA	3710	2/25	37	12.8	3.9	12.4
Lightning Lake	3D02CAN	4000	2/27	38	10.2	7.1	9.9
Lyman Lake	20A23	5900	2/25	116	40.0	46.2	47.5
Meadows Cabin	20A08	1900	2/26	22	7.0	1.7	7.0
New Hozomeen Lake	21A30	2800	2/26	37	10.6	4.5	12.8
Rainy Pass	20A09	4780	2/27	83	28.8	24.6	35.7
Thunder Basin	20A07	4200	2/26	63	19.8	9.0	19.9

Average based on 1961-1980 averages
sp SNOTEL data

WSFB-X-L

SNOW DATA TO MARCH 1, 1985 - APPENDIX 8

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Last Year	Average #
BAKER RIVER							
Dock Butte +	20A11A	3800	2/27	141	59.0	51.0	59.9
Easy Pass +	21A07A	5200	2/27	173	70.0	54.0	79.5
Jasper Pass +	21A06A	5400	2/27	167	68.0	68.0	78.8
Martin Lake	21A09A	3600	2/27	172	72.0	56.0	67.1
Mt. Blum +	21A18A	5800	2/27	126	51.0	50.0	58.6
Rocky Creek	21A12A	2100	2/27	84	36.0	14.0	26.8
Schreibers Meadow	21A10A	3400	2/27	120	50.0	34.0	51.9
S.F. Thunder Creek +	21A14A	2200	2/27	29	13.0	2.0	9.4
Watson Lakes	21A08A	4500	2/27	139	58.0	45.0	55.9
OLYMPIC PENINSULA DRAINAGE							
DUNGENESS RIVER							
Deer Park	23B04	5200	2/26	52	18.6	11.0	17.4
MORSE CREEK							
Cox Valley	23B14	4500	2/27	90	34.3	26.8	33.9
ELWHA RIVER							
Hurricane	23B03	4500	2/24	53	17.3	12.0	18.9
WYNOOCHEE RIVER							
Carrol Pass	23B15	3650	2/28	74	28.0		

\+ Aerial stadia observation
\# Average based on 1961-1980 average

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SNOTEL READINGS, MARCH 1, 1985 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average
PEND OREILLE RIVER							
Bunchgrass Meadows	17A01	5000	02/15		20.9	17.7	
	GT		03/05	76	25.5		
			02/28		22.0	21.0	23.1
OKANOGAN & METHOW RIVERS							
Harts Pass	20A05	6500	02/15		31.9	25.5	
	GT		02/27	89	29.5		
			02/28		33.4	28.7	33.6
Salmon Meadows	19A02	4500	02/15		12.7	15.0	
			02/28		12.7	17.0	14.9
CHELAN LAKE BASIN							
Lyman Lake	20A23	5900	02/15		41.1	47.2	
	GT		02/25	123	43.5		
			02/28		44.4	52.5	52.3
Mirror Lake	20A39	5600	02/15		21.8	23.0	
	GT		02/25	71	24.8		
			02/28		22.1	24.7	24.7
Park Creek Ridge	20A12	4600	02/15		33.1	27.5	
	GT		02/25	97	37.5		
			02/28		34.9	27.1	36.8
Rainy Pass	20A09	4780	02/15				
	GT		02/27	78	26.0		
			02/28		33.0	27.1	33.2
ENTIAT RIVER							
Pope Ridge	20B20	3450	02/15		15.3	14.8	
	GT		02/27	42	14.5		
			02/28		15.4	16.3	16.6
WENATCHEE RIVER							
Blewett Pass	20B02	4270	02/15		15.3	15.6	
	GT		01/28	36	11.4		
			02/28		16.2	17.4	18.0
Lyman Lake	20A23	5900	02/15		41.1	47.2	
	GT		02/25	123	43.5		
			02/28		44.4	52.5	52.3
Stevens Pass	21B01	4070	02/15		42.9	28.1	
	GT						
			02/28		46.3	31.7	23.6
Trough # 2	20B25	5300	02/15		8.2	2.3	
	GT		02/14	27	7.3		
			02/28		8.3	3.5	10.5

GT = Ground Truth measurement at SNOTEL site

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SNOTEL READINGS, MARCH 1, 1985 - APPENDIX 2

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches) Last Year	Water Content (Inches) Average
COLOCKUM CREEK							
Trough # 2	20B25	5300	02/15		8.2	2.3	
	GT		02/14	27	7.3		
			02/28		8.3	3.5	10.5
STEMILT CREEK							
Upper Wheeler	20B07	4400	02/15		9.9	10.2	
	GT		03/01	37	10.8		
			02/28		9.9	12.4	16.5
YAKIMA RIVER							
Big Boulder Creek	21B09	3200	DISCONTINUED				
Bumping Ridge	21C38	4600	02/15		25.4	22.8	
	GT		02/22	78	27.0		
			02/28		26.8	24.8	13.7
Corral Pass	21B13	6000	02/15				
			02/28				20.8
Fish Lake	21B04	3371	02/15		28.1	22.7	
	GT		02/13	87	26.0		
	GT		02/26	75	28.0		
			02/28		31.0	25.1	17.9
Green Lake	21C10	6000	02/15		12.4	14.1	
	GT		02/12	56	16.5		
			02/28		12.0	16.2	22.1
Grouse Camp	20B11	5385	02/15		13.3.	14.8	
	GT		01/28	39	12.4		
			02/28		13.7	16.3	20.0
Morse Lake	21C17	5400	02/15		34.5	38.8	
			02/28		37.9	45.6	43.6
Sasse Ridge	21C40	4400	02/15				
	GT		02/13	89	24.0		
	GT		02/26	85	27.2		
			02/28		26.2		
White Pass E. Side	21C28	4500	02/15		21.3	18.2	
	GT		02/23	64		22.0	
			02/28		22.6	20.7	22.1

GT = Ground Truth measurement at SNOTEL site

WSFB-X4-L

SNOTEL READINGS, MARCH 1, 1985 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average
AHTANUM CREEK							
Green Lake	21C10	6000	02/15		12.4	14.1	
	GT		02/12	56	16.5		
			02/28		12.0	16.2	22.1
TOUCHET RIVER							
Touchet # 2	17C5	5530	02/15		41.3		
	GT		03/01	98	38.7		
			02/28		42.3	24.3	24.0
LEWIS RIVER							
June Lake	22C09	3200	02/15		35.2		
	GT						
			02/28		36.1		
Lone Pine Shelter	21C26	3800	02/15		34.6	25.7	
	GT						
			02/28		35.9	29.6	36.9
Plains of Abraham	22C01	4400	02/15		67.2	51.6	
			02/28		72.4	62.9	61.7
Sheep Canyon	22C10	4050	02/15		45.8	22.1	
			02/23		47.3	29.4	15.7
Spencer Meadow	21C20	3400	02/15			15.8	
			02/28			17.6	23.0
Surprise Lake	21C13	4250	02/15			38.1	
	GT						
			02/28			43.9	37.8
COWLITZ RIVER							
Pigtail Peak	21C33	5900	02/15		45.6	33.9	
	GT		02/28	109	43.0		
			02/28		41.4	36.9	36.5
Potato Hill	21C14	4500	02/15		30.0	15.8	
	GT		02/13	82	27.6		
			02/28		30.2	18.8	19.5
Sheep Canyon	22C10	4050	02/15		45.8	22.1	
			02/23		47.3	29.4	15.7
Strawberry Landing	22C08	3280	02/15		47.5		16.9
	GT						
			02/28		51.9		32.8
Steppes PC	22C11		12/5				
Spirit PC	22C12		5/15				
			5/30				

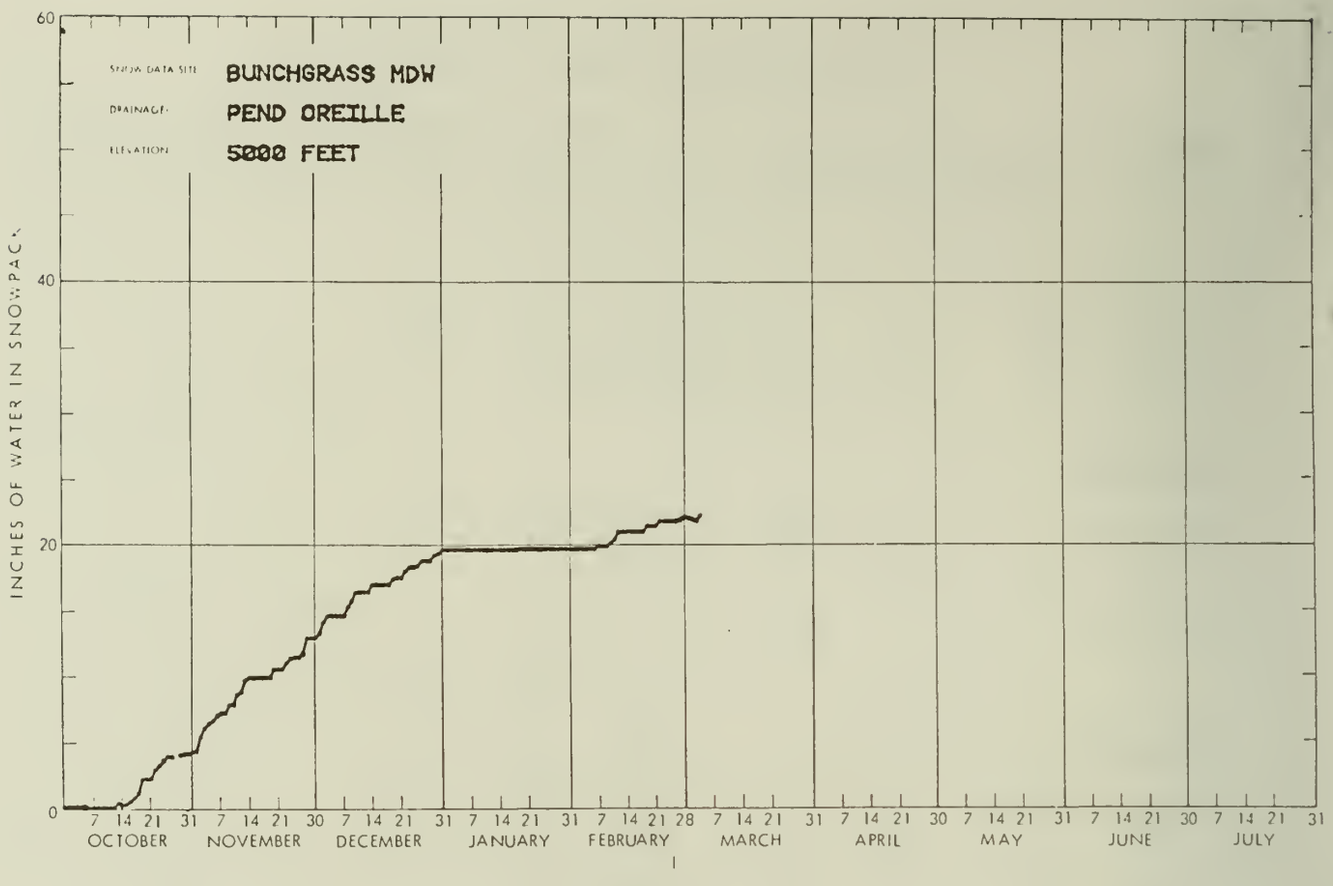
GT = Ground Truth measurement at SNOTEL sites

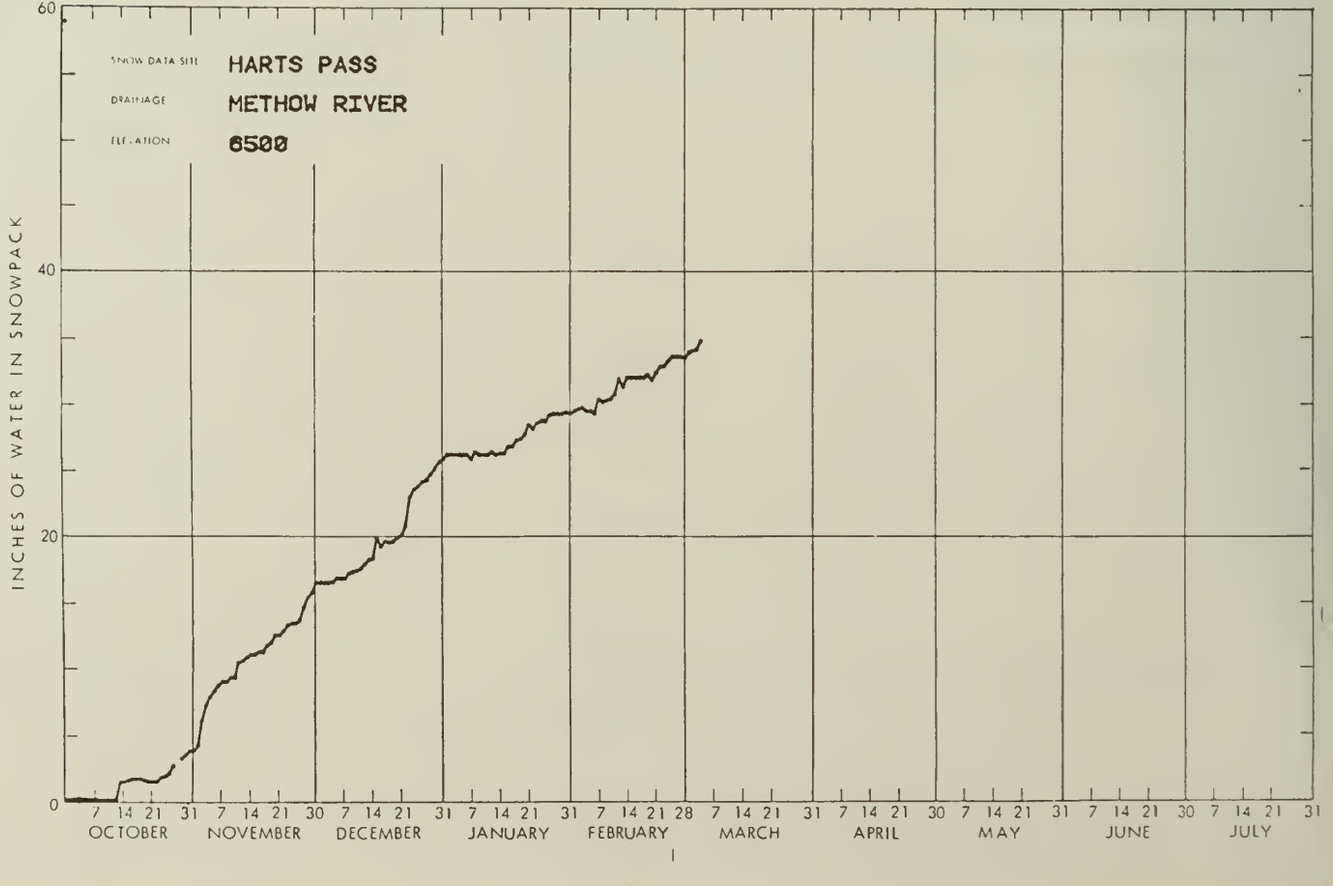
WSFB-X4-L

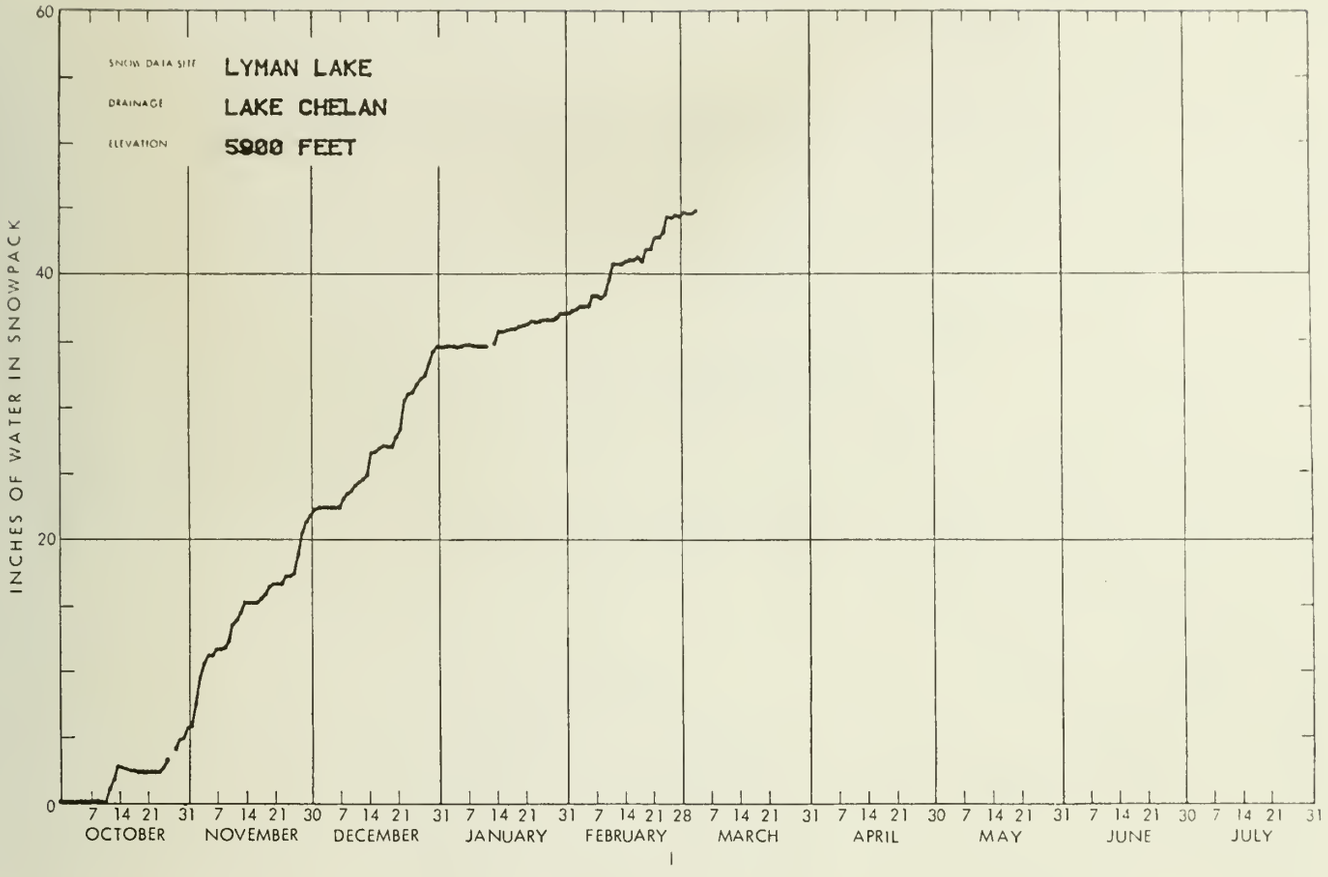
SNOTEL READINGS, MARCH 1, 1985 - APPENDIX 4

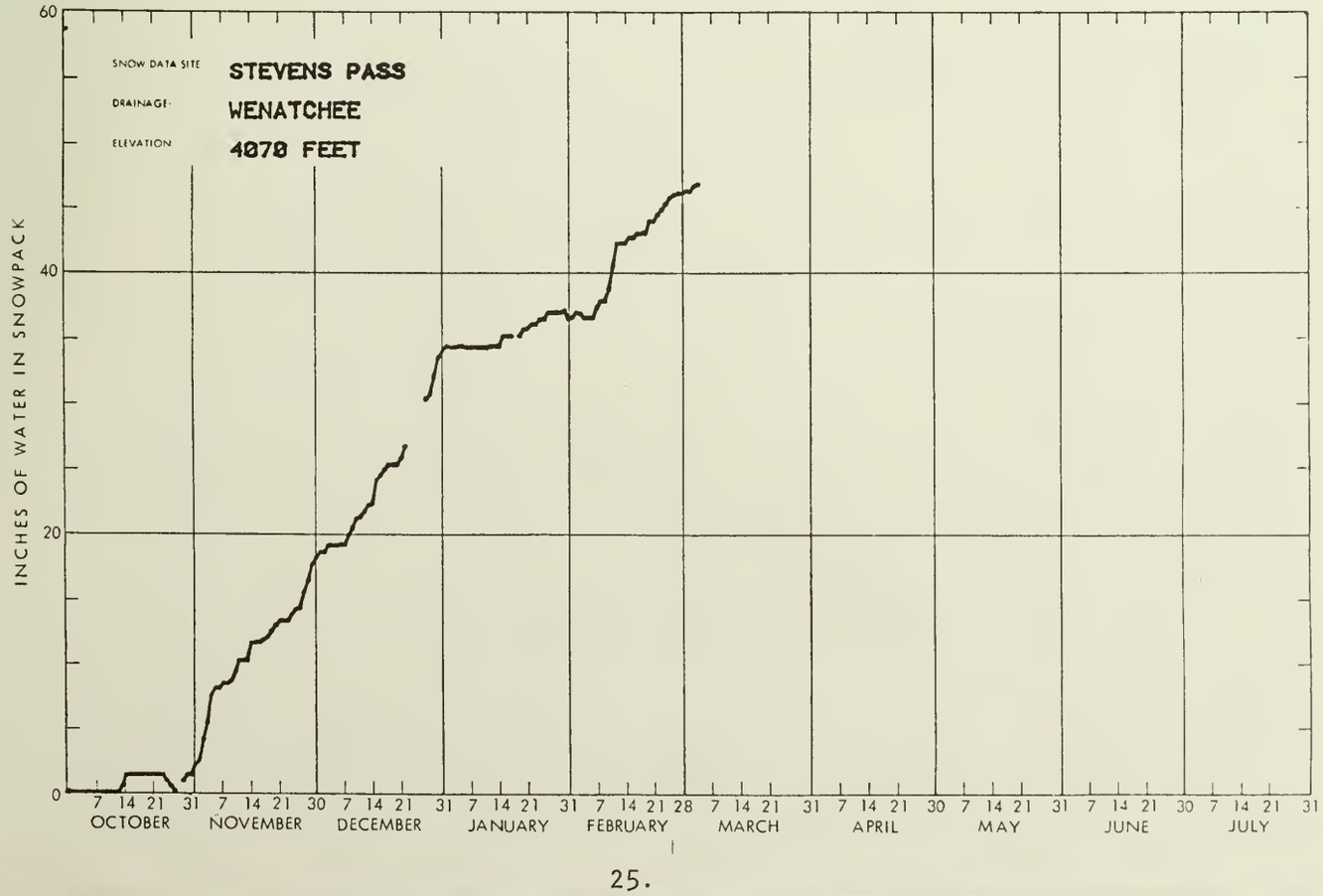
SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average
NISQUALLY RIVER							
Paradise Park	21C35	5500	02/15			44.8	
			02/28		63.2	33.0	32.8
WHITE RIVER							
Corral Pass	21B13 GT	6000	02/15				
Morse Lake	21C17 GT	5400	02/15		34.5	38.8	
			02/28		37.9	45.6	43.6
GREEN RIVER							
Cougar Mountain	21B42 GT	3200	02/15			12.2	
			02/28		26.1	14.6	14.3
Stampede Pass	21B10	3960	02/15		40.3	32.5	
	GT		03/01	99	41.5		
			02/28		40.0	36.4	35.1
SNOQUALMIE RIVER							
Olallie Meadows East	21B55	3960	02/15		54.2	37.7	
			02/28		58.4	42.8	43.5

GT = Ground Truth measurements at SNOTEL sites


SNOW DATA SITE
BUNCHGRASS MDW
DRAINAGE
PEND OREILLE
ELEVATION
5000 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE
HARTS PASS
DRAINAGE
METHOW RIVER
ELEVATION
6500
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE
LYMAN LAKE
DRAINAGE
LAKE CHELAN
ELEVATION
5900 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


WSFB-X13C
SNOW DATA SITE
STEVENS PASS
DRAINAGE
WENATCHEE
ELEVATION
4070 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
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DECEMBER
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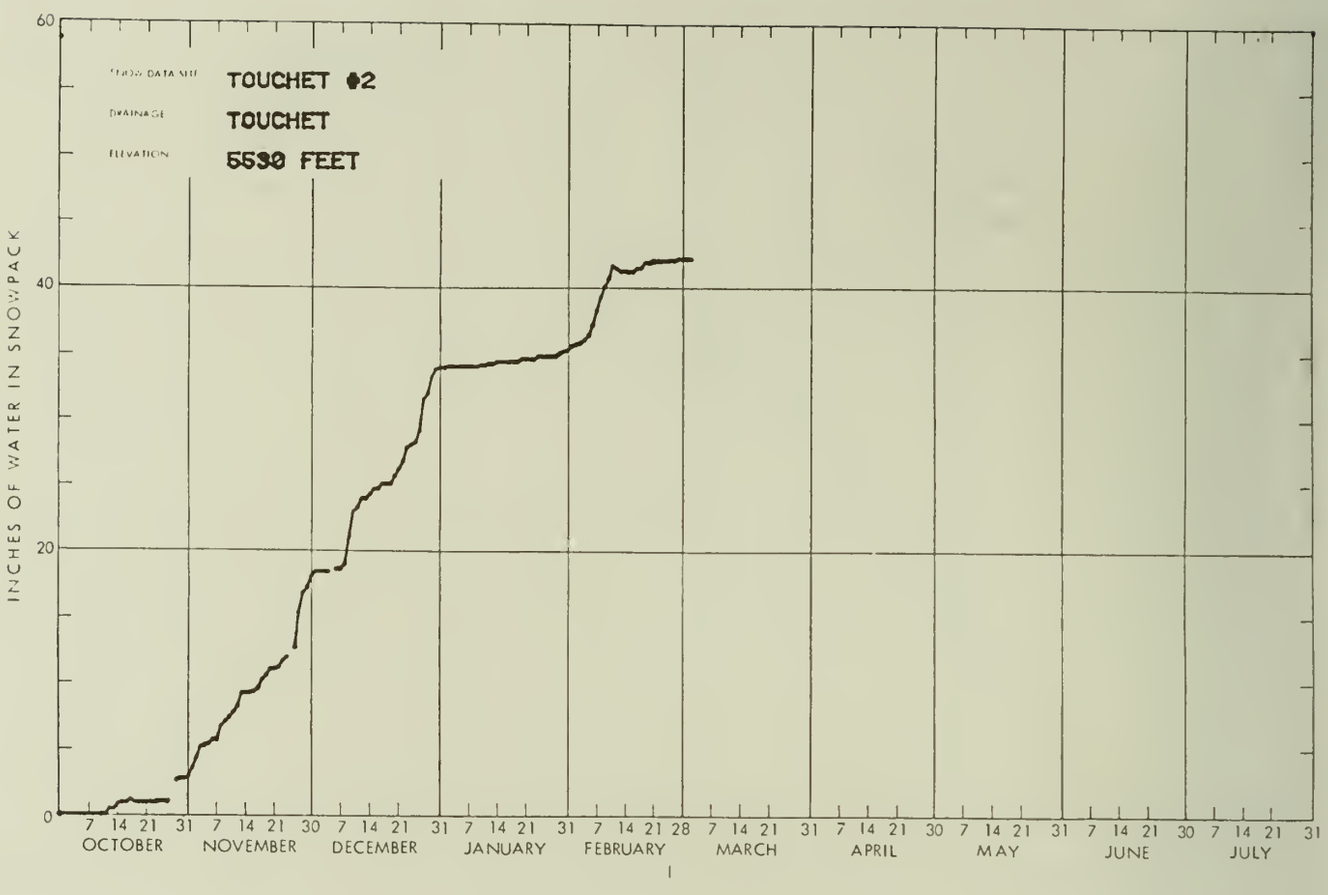
JUNE
JULY


SNOW DATA SITE
TOUCHET #2
DRAINAGE
TOUCHET
ELEVATION
5530 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
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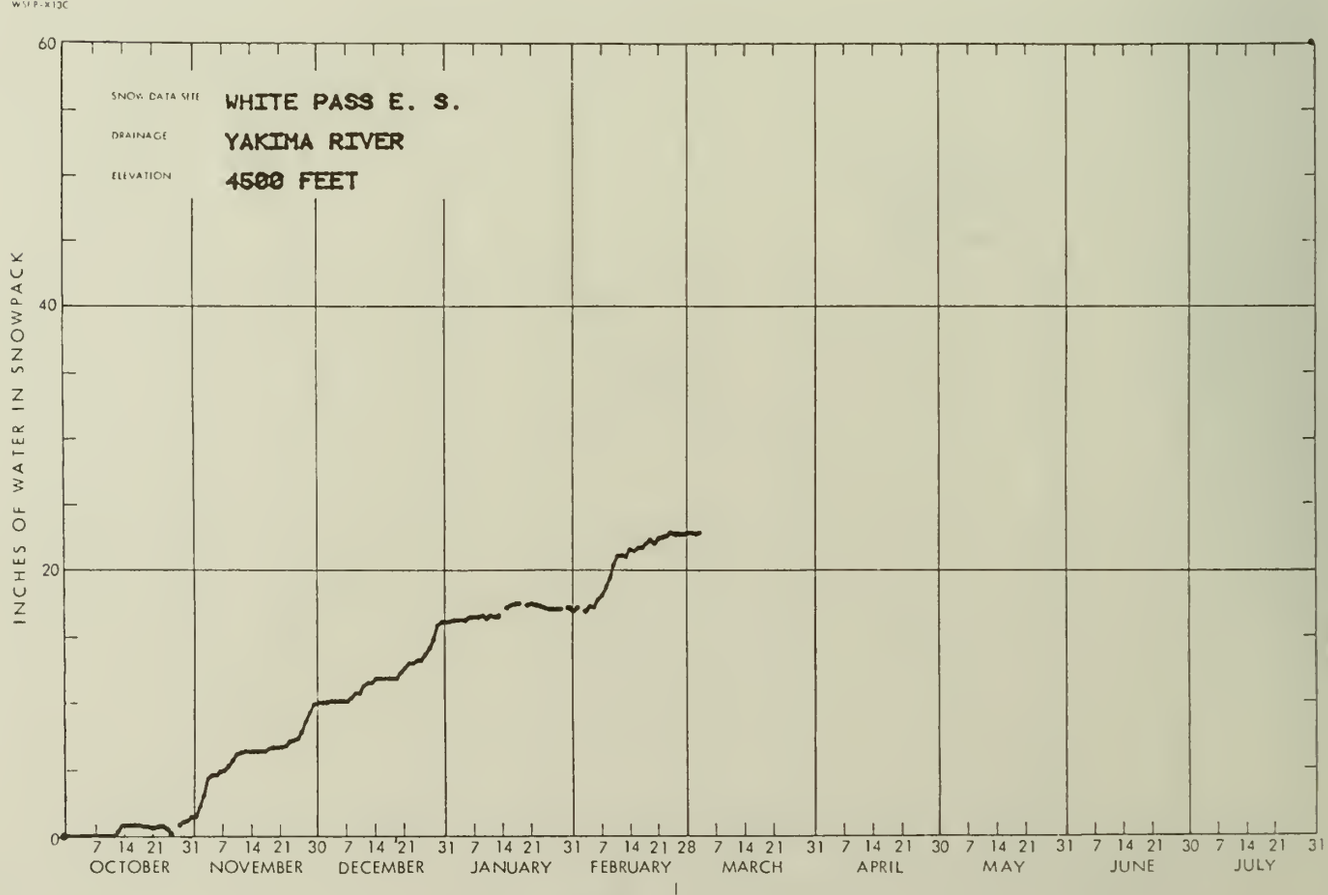
SNOW DATA SITE
WHITE PASS E. S.
DRAINAGE
YAKIMA RIVER
ELEVATION
4500 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Ministry of the Environment, Water
Investigations Branch, Victoria, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
  Corps of Engineers
U.S. Department of Agriculture
  Forest Service
U.S. Department of Commerce
  NOAA, National Weather Service
U.S. Department of the Interior
  Bonneville Power Administration
  Bureau of Reclamation
  Geological Survey
  National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
ROOM 360, U.S. COURT HOUSE
SPOKANE, WASHINGTON 99201

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United States
Department of
Agriculture

**Soil
Conservation
Service**

Spokane,
Washington

Water Supply Outlook for Washington

as of APRIL 1, 1985

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MAY 20 1985
University of Illinois
at Urbana-Champaign

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: "Snow scene along trail to Mt. Hood test site snow course"

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P.O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	P.O. Box 98, Bozeman, Montana 59715
Nevada	P.O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4402 Federal Bldg., 125 South State St., Salt Lake City, Utah 84147
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P.O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 — for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 — for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 — and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.

WATER SUPPLY OUTLOOK FOR WASHINGTON

and

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

ISSUED BY

PETER C. MYERS
Chief
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

RELEASED BY

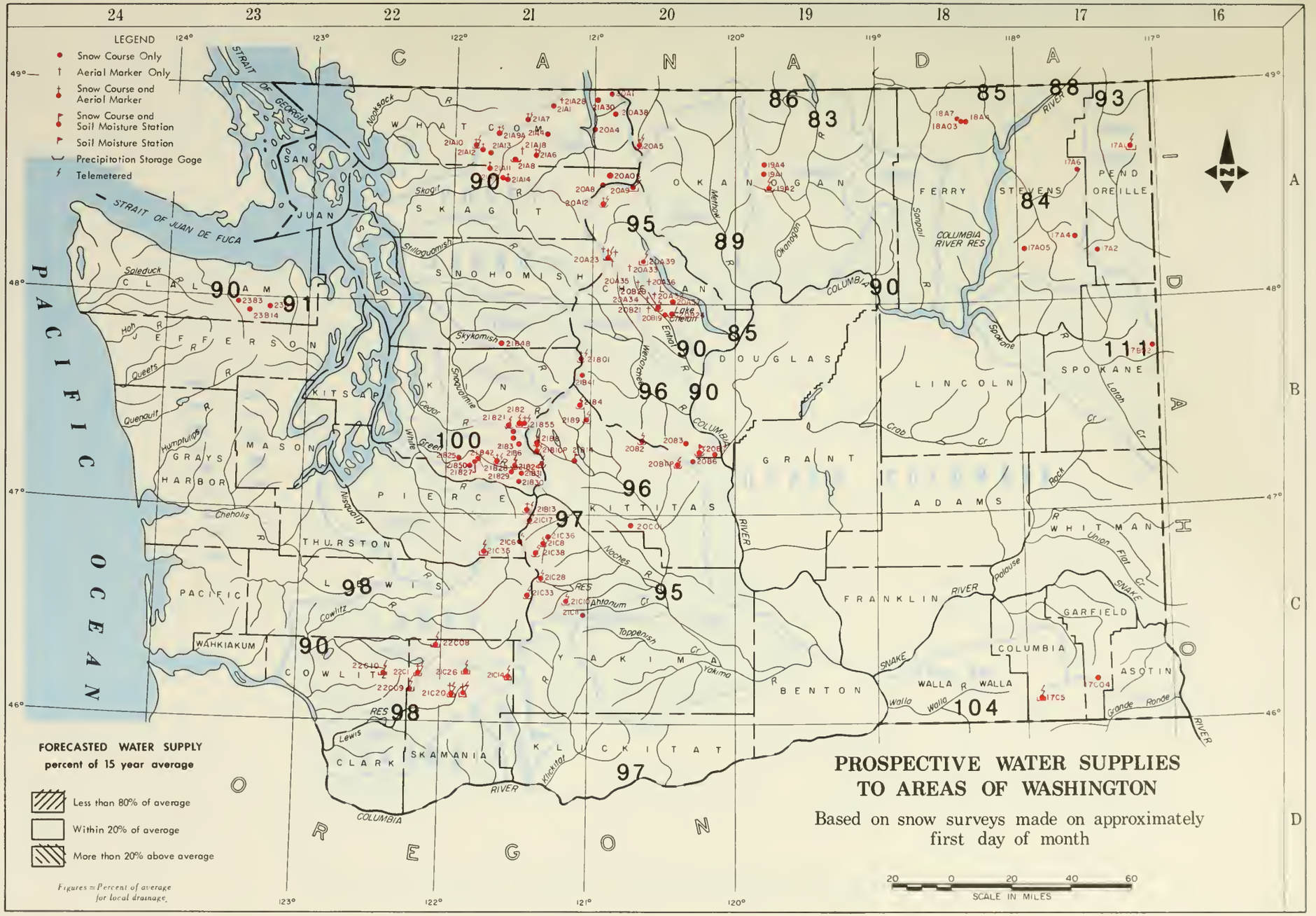
LYNN A. BROWN
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

FORECASTS BY

SOIL CONSERVATION SERVICE
WATER SUPPLY FORECASTING STAFF, WNTC
PORTLAND, OREGON
and
NATIONAL WEATHER SERVICE
RIVER FORECAST CENTER
PORTLAND, OREGON

REPORT PREPARED BY

WILLIAM F. WELLER, Hydrologist
JOLA L. MICKELSEN, Secretary
SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201


LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Moisture Station
Soil Moisture Station
Precipitation Storage Gage
Telemetered
FORECASTED WATER SUPPLY
percent of 15 year average
Less than 80% of average
Within 20% of average
More than 20% above average
Figures = Percent of average for local drainage
PROSPECTIVE WATER SUPPLIES TO AREAS OF WASHINGTON
Based on snow surveys made on approximately first day of month
SCALE IN MILES
CANADA
OREGON
PACIFIC OCEAN
WHATCOM
SKAGIT
SNOHOMISH
KING
KITSAP
JEFFERSON
CLALLAM
OKANOGAN
FERRY
STEVENS
PEND OREILLE
CHELAN
DOUGLAS
LINCOLN
SPOKANE
GRANT
ADAMS
WHITMAN
MASON
GRAYS HARBOR
PIERCE
KITTITAS
THURSTON
LEWIS
YAKIMA
FRANKLIN
BENTON
GARFIELD
COLUMBIA
ASOTIN
WALLA WALLA
WAHKIAKUM
COWLITZ
SKAMANIA
KLICKITAT
CLARK
SAN JUAN
STRAIT OF JUAN DE FUCA
STRAIT OF GEORGIA
COLUMBIA RIVER RES
90
91
100
83
86
85
88
93
84
89
95
96
97
98
104
111

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
UPPER COLUMBIA DRAINAGE					
Pend Oreille River					
Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Kettle River					
Summit G. S.	18A7	20	39N	35E	4600
Butte Creek	18A3	28	39N	35E	4070
Goat Creek	18A4	26	39N	35E	3595
Spokane River					
Rogged Ridge	17B02	12	27N	45E	3333
Calville River					
Baird	17A6	19	36N	42E	3215
Stranger Mountain	17A5	26	31N	38E	4990
Chewelah	17A4	11	32N	41E	4925
Okanagan River					
Muttan Creek No. 1	19A1	30	37N	24E	5700
Muttan Creek No. 2	19A4	19	37N	24E	6000
Salmon Meadows	19A2SP	33	37N	24E	4500
Methaw River					
Harts Pass	20A5SP	7	37N	18E	6500
Chelan Lake Basin					
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Mirrar Lake	20A39	30	31N	18E	5600
Entiat River					
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Fox Camp	20A36a	17	30N	18E	6510
Pope Ridge	20B20	22	29N	18E	3540
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tommy Creek	20B21a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	20B2SP	35	22N	17E	4270
Stevens Pass	21B1SP	14	26N	13E	4070
Trough #2	20B25SP	10	20N	20E	5310
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Stemilt Creek					
Stemilt Slide	2086	30	21N	20E	5000
Upper Wheeler	20B7SP	30	21N	20E	4400
Yakima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Fish Lake	21B4SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grause Camp	20B11SP	29	21N	19E	5385
Lake Cle Elum	21B14M	15	20N	14E	2200
Marse Lake	21C17SP	6	16N	11E	5400
Tunnel Avenue	21B8P	13	21N	11E	2450
White Pass (East Side)	21C28SP	2	13N	11E	4500

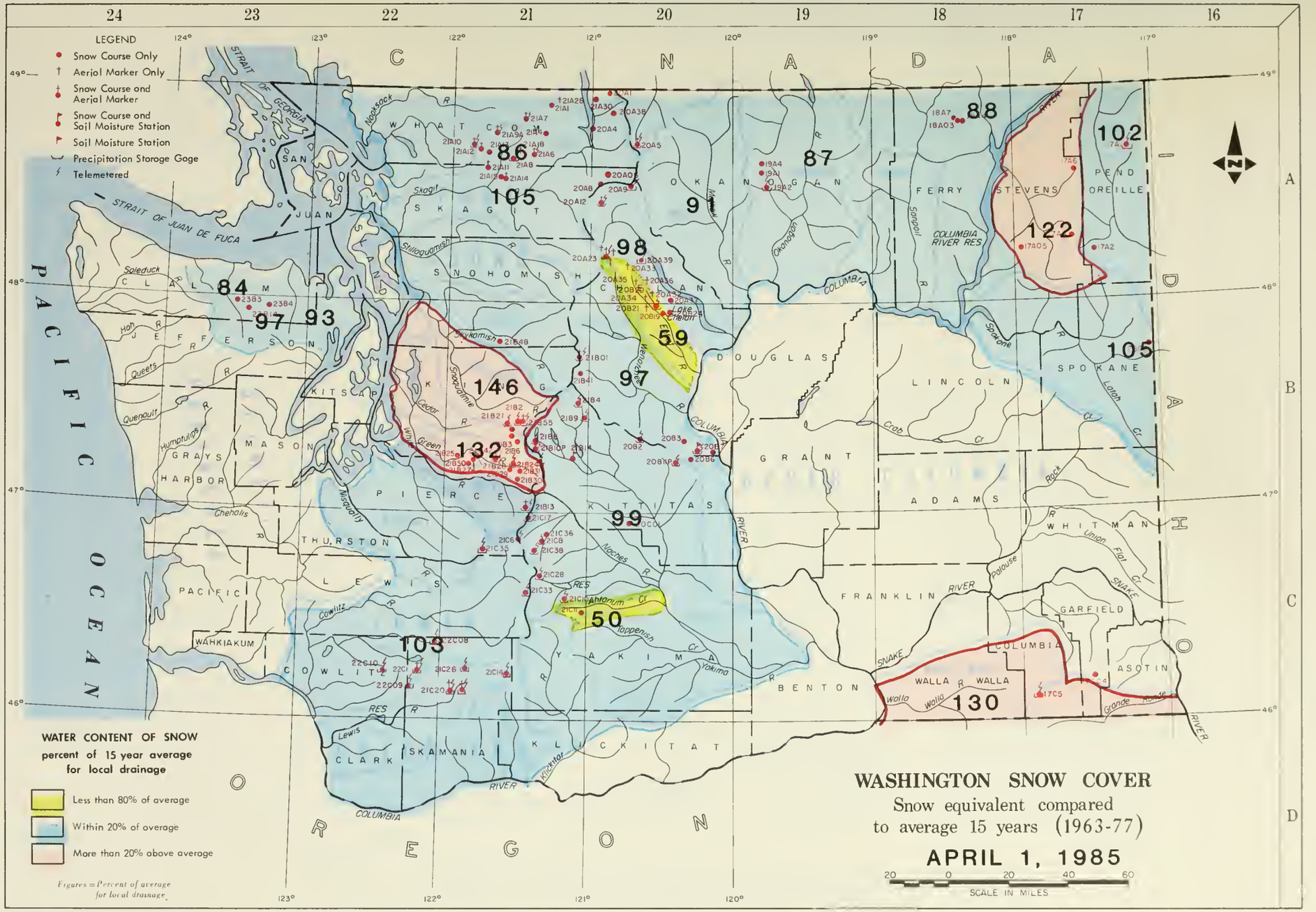
NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
LOWER COLUMBIA DRAINAGE					
Asatin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Tauchet River					
Tauchet No. 2	17C5SP	6	7N	40E	5530
Lewis River					
June Lake	22C09SP	26	8N	5E	3200
Lane Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250
Cowlitz River					
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Patata Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280
PUGET SOUND DRAINAGE					
Nisqually River					
Paradise Park (New)	21C35SP	13	15N	8E	5500
White River					
Carral Pass	21B13SP	30	18N	11E	6000
Green River					
Airstrip	21824P	18	20N	11E	1800
Charley Creek	21825	27	21N	8E	1200
Cougar Mountain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21B28	12	20N	8E	2100
Lester Creek	21829	36	20N	10E	3100
Lynn Lake	21B50	22	20N	8E	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Stampede Pass	21B10SP	25	21N	11E	3860
Twin Camp	21830	18	19N	11E	4100
Cedar River					
City Cabin	2183	10	21N	10E	2390
Mt. Gardner	21821P	30	22N	10E	3300
Snoqualmie River					
Alpine Meadow	21848	31	27N	9E	3500
Olallie Meadows	2182P	19	22N	11E	3625
Olallie Meadows East	21B55SP	20	22N	11E	3700
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brown Tap	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadows (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadows Cabins	20A8	29	36N	14E	1900
New Hazomeen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Baker River					
Dock Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Maunt Blum	21A18a	27	38N	10E	5800
Racky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500
OLYMPIC PENINSULA					
Dungeness River					
Deer Park	23B4	1	28N	5W	5200
Elwha River					
Hurricane	23B3	36	29N	7W	4500
Cax Valley	23B14	31	29N	6W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow

USDA-SCS-PORT WORTH, TEXAS 1985 M7-OL-2202BC



INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
UPPER COLUMBIA DRAINAGE					
Pend Oreille River					
Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Kettle River					
Summit G. S.	18A7	20	39N	35E	4600
Butte Creek	18A3	28	39N	35E	4070
Goat Creek	18A4	26	39N	35E	3595
Spokane River					
Ragged Ridge	17802	12	27N	45E	3333
Colville River					
Baird	17A6	19	36N	42E	3215
Stranger Mountain	17A5	26	31N	38E	4990
Chewelah	17A4	11	32N	41E	4925
Okanogon River					
Mutton Creek No. 1	19A1	30	37N	24E	5700
Mutton Creek No. 2	19A4	19	37N	24E	6000
Salmon Meadows	19A2SP	33	37N	24E	4500
Methow River					
Harts Pass	20A5SP	7	37N	18E	6500
Chelan Lake Bosin					
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Mirror Lake	20A39	30	31N	18E	5600
Entiat River					
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Fox Camp	20A36a	17	30N	18E	6510
Pope Ridge	20B20	22	29N	18E	3540
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tommy Creek	20B21a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	20B2SP	35	22N	17E	4270
Stevens Pass	21B1SP	14	26N	13E	4070
Trough #2	20B25SP	10	20N	20E	5310
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Stemilt Creek					
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	2087SP	30	21N	20E	4400
Yakima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Fish Lake	21B4SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grouse Camp	20B11SP	29	21N	19E	5385
Lake Cle Elum	21B14M	15	20N	14E	2200
Morse Lake	21C17SP	6	16N	11E	5400
Tunnel Avenue	21B8P	13	21N	11E	2450
White Poss (East Side)	21C28SP	2	13N	11E	4500

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
LOWER COLUMBIA DRAINAGE					
Asotin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Touchet River					
Touchet No. 2	17C5SP	6	7N	40E	5530
Lewis River					
June Lake	22C09SP	26	8N	5E	3200
Lone Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250
Cowlitz River					
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Potato Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280
PUGET SOUND DRAINAGE					
Nisqually River					
Paradise Park (New)	21C35SP	13	15N	8E	5500
White River					
Corral Pass	21813SP	30	18N	11E	6000
Green River					
Airstrip	21824P	18	20N	11E	1800
Charley Creek	21825	27	21N	8E	1200
Cougar Mountain	21842SP	21	21N	9E	3200
Grass Mountain No. 2	21827	14	20N	8E	2900
Grass Mountain No. 3	21828	12	20N	8E	2100
Lester Creek	21829	36	20N	10E	3100
Lynn Lake	21850	22	20N	8E	4000
Sawmill Ridge	21831	5	19N	11E	4700
Stampede Pass	21B10SP	25	21N	11E	3860
Twin Camp	21B30	18	19N	11E	4100
Cedar River					
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21P	30	22N	10E	3300
Snoqualmie River					
Alpine Meadow	21848	31	27N	9E	3500
Olallie Meadows	21B2P	19	22N	11E	3625
Olallie Meadows East	21B55SP	20	22N	11E	3700
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brown Top	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadows (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadows Cabins	20A8	29	36N	14E	1900
New Hozomeen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Baker River					
Dock Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Mount Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500
OLYMPIC PENINSULA					
Dungeness River					
Deer Park	23B4	1	28N	5W	5200
Elwha River					
Hurricane	23B3	36	29N	7W	4500
Cox Valley	23B14	31	29N	6W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow

WATER SUPPLY OUTLOOK

State of Washington

APRIL 1, 1985

The cold, relatively dry trend established in early January continued through March. Changes in Washington water supply forecasts for April 1 include some downward forecasts for the main stem Columbia River and other streams in the northeast section. Supplies are expected to be near average over the entire state. The mountain snowpack was generally near average over most of Washington. Precipitation for March continued to be below average. Reservoir storage has not changed materially over the March 1 report. Near to below average temperatures have held streamflows to below normal.

COVER

April snow cover changed only slightly from those measured during the March 1st period. Snow cover is still showing slightly below average for the lower elevations in the Cascades. The higher elevation snow courses in the Cascades and the snow courses in the eastern portion of the state are near average to slightly above average. Drainage areas in the state with above average snowpack include the Walla Walla, Spokane,and Colville rivers. Poor visibility in the Green River and other parts of the Puget Sound reduced the number of snow surveys available in that area. Ahtanun Creek and the Entiat River continue below average with snow cover of 50% and 59%.

PRECIPITATION

March precipitation was below average over most of the state, with the exception of Southeastern Washington at 122% the only area above average. Northeastern Washington had 65% of average while the North Central area had 77%. The lowest amount of precipitation fell in the North Central area with .50 inches during March. The west side of the Cascades was also below average with the north having 76% and the south 88%.

RESERVOIR STORAGE

Washingtons stored water supplies are fair within the irrigated sections of the state. Below normal temperatures have kept area streamflows very low causing some power companies to draw from reservoir storage for winter demand. Irrigation reservoirs are storing 541,800 acre feet of water in the Yakima, compared to the March 1 average of 741,500, or 73% of normal. The reservoirs in the Okanogan Irrigation District are near capacity. Lake Chelan at 138,600 acre-feet, is 47% of normal. Power reservoirs in the Puget Sound area are at 66% of average for April 1.

STREAMFLOW

March continued much like January and February with below normal temperatures during most of the month, slowing the snowmelt and keeping streamflows low. Streams in the state had the following average flows for March; the Pend Oreille River at 55%, Spokane River at 54%, Yakima River at 58% and the Wenatchee River at 47%. The Walla Walla River had the nearest to average flow with 93%, while the Skykomish river was the lowest with 46% of normal. Temperatures have been near or below average. The following stations reported below average for March, Spokane -2, Astoria -2, and Seattle -2. Forecasted streamflows for the main stem Columbia River at Birchbank have been reduced from 96% of normal to 88%. Some other streams having reduced forecasted flows include the Colville from 94% to 84%; Pend Oreille from 97% to 93%; Okanogan from 103% to 97%; and the Cowlitz from 101% to 90%.

STREAMFLOW FORECASTS - APRIL 1985

THE FOLLOWING SUMMARIZED RUNOFF FORECASTS ARE BASED PRINCIPALLY ON MOUNTAIN SNOW COVER AND ON THE ASSUMPTION THAT PRECIPITATION AND TEMPERATURE WILL BE NEAR AVERAGE FROM THE PRESENT TIME TO THE END OF THE FORECAST PERIOD. APPRECIABLE DEVIATIONS FROM NORMAL TEMPERATURE AND/OR PRECIPITATION WILL CORRESPONDINGLY MODIFY THESE FORECASTS. THESE FORECASTS ARE MADE AS A PRODUCT OF THE COOPERATIVE EFFORTS OF THE SOIL CONSERVATION SERVICE AND THE NATIONAL WEATHER SERVICE. STREAMFLOW FIGURES FOR 1982-1984 ARE PRELIMINARY AND SUBJECT TO REVISION.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	30-YR AVERAGE 61-80
COLUMBIA RIVER SYSTEM /1/							
COLUMBIA RIVER	39300	88	APR-SEPT	39200	43225	48575	44605
AT BIRCHBANK	31500	88	APR-JULY	30400	34569	38210	35705
	22900	88	APR-JUNE	20700	24281	27454	26027
COLUMBIA RIVER	60000	90	APR-SEPT	62500	46662	56425	66841
AT GRAND COULEE	50800	90	APR-JULY	51900	34933	43821	56169
	39600	90	APR-JUNE	39400	65970	32610	44036
COLUMBIA RIVER	66400	91	APR-SEPT	66300	44560	79386	72781
BL ROCK ISLAND	56600	92	APR-JULY	55600	58672	66629	61601
	44000	91	APR-JUNE	42200	69844	49348	48384
COLUMBIA RIVER	97700	97	APR-SEPT	107700	103682	118503	101000
AT THE DALLES	84200	97	APR-JULY	92700	88273	101631	86500
	68000	97	APR-JUNE	74600	70038	80122	70100
PEND OREILLE RIVER SYSTEM							
PEND OREILLE	14400	93	APR-SEPT	12980	12841	17721	15425
BL. BOX CANYON	13200	93	APR-JULY	11780	11482	16324	14156
	11400	93	APR-JUNE	9895	9226	13306	12227
KETTLE RIVER SYSTEM							
KETTLE RIVER	1550	85	APR-SEPT	2438	2709	2330	1829
NR LAURIER	1470	85	APR-JULY	2327	2534	2174	1738
	1350	85	APR-JUNE	2004	2251	1747	1581
COLVILLE RIVER	113	84	APR-SEPT	243	182	160	134
AT KETTLE FALLS	103	84	APR-JULY	221	161	161	123
	96	84	APR-JUNE	197	144	132	114

/1/ OBSERVER FLOW CORRECTED FOR STORAGE IN ANY OF THE FOLLOWING RESERVOIRS WHICH ARE ABOVE THE STATION: KOOTENAY LAKE, HUNGRY HORSE, FLATHEAD LAKE, PEND OREILLE LAKE, F.D. ROOSEVELT LAKE, LAKE CHELAN, COEUR D'ALENE LAKE, BROWNLEE, NOXON RESERVOIR AND PUMPAGE AT F. D. ROOSEVELT LAKE.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
SPOKANE RIVER SYSTEM							
SPOKANE RIVER	3175	111	APR-SEPT	2808	2243	2238	2848
AT POST FALLS/2/	3070	111	APR-JULY	2647	2067	2145	2754
OKANOGAN RIVER SYSTEM							
SIMILKAMEEN R.	1260	86	APR-SEPT	1214	1490	1638	1462
NR NIGHTHAWK	1175	86	APR-JULY	1116	1356	1491	1365
	1000	86	APR-JUNE	894	1155	1166	1161
OKANOGAN RIVER	1370	83	APR-SEPT	1688	2170	2046	1644
NR TONASKET	1240	83	APR-JULY	1492	1891	1712	1497
	1050	83	APR-JUNE	1179	1569	1306	1262
METHOW RIVER SYSTEM							
METHOW RIVER	870	89	APR-SEPT	976	1354	1203	980
NR PATEROS	810	89	APR-JULY	886	1243	1120	908
	690	89	APR-JUNE	722	1094	918	773
CHELAN RIVER SYSTEM							
CHELAN RIVER	1020	85	APR-SEPT	1079	1261	1376	1203
AT CHELAN /3/	900	85	APR-JULY	946	1104	1223	1055
	700	85	APR-JUNE	688	901	958	826
STEHEKIN RIVER	820	95	APR-SEPT	736		938	860
AT STEHEKIN	690	95	APR-JULY	608	727	800	727
	525	95	APR-JUNE	411	572	603	553
ENTIAT RIVER	212	90	APR-SEPT	231	292	282	235
NR ARDENVOIR	192	90	APR-JULY	207	263	258	213
	155	90	APR-JUN	152	221	206	172
WENATCHEE RIVER SYSTEM							
WENATCHEE RIVER	1220	96	APR-SEPT		GAGE ABANDONED		1270
NR PLAIN	1090	96	APR-JULY				1136
	860	96	APR-JUNE				899
WENATCHEE RIVER	1660	97	APR-SEPT	1541	1590	2013	1712
AT PESHASTIN	1500	97	APR-JULY	1385	1432	1791	1545
	1200	97	APR-JUNE	1022	1191	1429	1237
STEMILT BASIN	*130	94	MAY-SEPT		GAGE ABANDONED		**138
NR WENATCHEE							
ICICLE CREEK	340	92	APR-SEPT		GAGE ABANDONED		**370
NR LEAVENWORTH	313	92	APR-JULY				**340
	250	93	APR-JUNE				**270

* THOUSANDS OF MINERS' INCHES.

** AVERAGE COMPUTED FOR 1963-1977.

/2/ FORECASTS MADE BY JERRY BEARD, SOIL CONSERVATION SERVICE, BOISE, IDAHO. OBSERVED FLOW CORRECTED FOR STORAGE IN COEUR D'ALENE LAKE.

/3/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE CHELAN.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
YAKIMA RIVER SYSTEM							
YAKIMA RIVER	133	96	APR-SEPT	133	109	152	139
NR MARTIN /4/	123	96	APR-JULY	123	96	138	128
	107	96	APR-JUNE	107	81	121	111
YAKIMA RIVER	905	96	APR-SEPT	917	733	1100	943
AT CLE ELUM /5/	820	96	APR-JULY	825	659	1010	854
	705	96	APR-JUNE	678	589	883	734
YAKIMA RIVER	1990	95	APR-SEPT	2069	2221	2434	2096
NR PARKER /6/	1800	95	APR-JULY	1779	1958	2193	1898
	1580	95	APR-JUNE	1491	1722	1909	1667
KACHESS RIVER	117	97	APR-SEPT	119	105	134	121
NR EASTON /7/	112	97	APR-JULY	108	96	126	115
	98	97	APR-JUNE	91	84	110	101
CLE ELUM RIVER	444	96	APR-SEPT	442	421	516	463
NR ROSLYN /8/	405	96	APR-JULY	397	381	468	422
	340	96	APR-JUNE	310	324	392	353
BUMPING RIVER	138	97	APR-SEPT	137	137	161	142
NR NILE /9/	125	97	APR-JULY	127	128	147	129
	104	97	APR-JUNE	102	109	123	107
AMERICAN RIVER	120	97	APR-SEPT	114	157	140	124
NR NILE	110	97	APR-JULY	104	144	130	113
	91	97	APR-JUNE	81	120	109	94
TIETON RIVER/10/	236	96	APR-SEPT	245	286	277	246
AT TIETON DAM	200	96	APR-JULY	198	239	239	207
	158	96	APR-JUNE	149	193	192	165
NACHES RIVER	840	97	APR-SEPT	812	966	998	867
NR NACHES /11/	760	97	APR-JULY	732	881	945	784
	647	97	APR-JUNE	601	770	775	667
AHTANUM CREEK	45	96	APR-SEPT	34	67	62	47
NR TAMPICO /12/	41	95	APR-JULY	29	61	58	43
	36	97	APR-JUNE	24	54	51	37

/4/ OBSERVED FLOW CORRETED FOR STORAGE IN LAKE KEECHELUS.
/5/ OBSERVED FLOW CORRECTED FOR STORAGE IN KEECHELUS, KACHESS, AND CLE ELUM LAKES AND DIVERSION BY KITTITAS CANAL.
/6/ OBSERVED FLOW CORRECTED FOR STORAGE IN KEECHELUS, KACHESS, CLE ELUM, BUMPING, AND RIMROCK LAKES AND DIVERSIONS BY ROSA, UNION GAP, NEW RESERVATION, OLD RESERVATION AND SUNNYSIDE CANALS.
/7/ OBSERVED FLOW CORECTED FOR STORAGE IN LAKE KACHESS.
/8/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE CLE ELUM.
/9/ OBSERVED FLOW CORRECTED FOR STORAGE IN BUMPING LAKE.
/10/ OBSERVED FLOW CORRECTED FOR STORAGE IN RIMROCK LAKE.
/11/ OBSERVED FLOW CORRECTED FOR STORAGE IN BUMPING AND RIMROCK LAKES AND DIVERSIONS BY TIETON, SELAH VALLEY, WAPATOX CANALS AND CITY OF YAKIMA.
/12/ OBSERVED FLOW OF NORTH AND SOUTH FORKS (COMBINED).

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
LOWER COLUMBIA RIVER SYSTEM							
MILL CREEK	18.2	104	APR-SEPT	23.46	13.48	24.62	**17.50
AT WALLA WALLA	18.0	104	APR-JULY	23.08	13.39	24.48	**17.33
	17.8	104	APR-JUNE	22.24	13.36	21.63	**17.15
LEWIS RIVER	1230	98	APR-SEPT	1284	1255	1170	1249
AT ARIEL /13/	1065	98	APR-JULY	1141	1046	1030	1086
	940	98	APR-JUNE	1012	821	927	961
COWLITZ RIVER	1990	98	APR-SEPT	2080	1935	4936	2038
BL MAYFIELD DAM	1740	98	APR-JULY	1860	1754	1963	1778
/14/	1470	98	APR-JUNE	1570	1424	1722	1502
COWLITZ RIVER	2400	90	APR-SEPT	3770	2618	2655	2673
AT CASTLE ROCK	2090	90	APR-JULY	3370	2195	2363	2323
/14/	1782	90	APR-JUNE	2860	1739	2080	1980
OLYMPIC PENINSULA							
DUNGENESS RIVER SYSTEM							
DUNGENESS RIVER	146	91	APR-SEPT		197	196	160
NR SEQUIM	118	91	APR-JULY		158	163	130
	88	91	APR-JUNE		117	117	97
ELWHA RIVER SYSTEM							
ELWHA RIVER	500	91	APR-SEPT	469	538	607	**553
NR PORT ANGELES	410	91	APR-JULY	383	448	512	**454
PUGET SOUND							
SKAGIT RIVER SYSTEM							
AT NEWHALEM /15/	2170	97	APR-SEPT	1378	1531	1880	**2356
	1815	97	APR-JULY	997	1061	1439	**1972
	1365	97	APR-JUNE	621	698	1004	**1485
GREEN RIVER SYSTEM							
GREEN RIVER BL	316	100	APR-SEPT	275	190	227	**316
HOWARD HANSEN DAM	284	100	APR-JULY	243	145	195	**284
/16/	256	100	APR-JUNE	217	107	174	**256
CEDAR RIVER SYSTEM							
CEDAR RIVER NR CEDAR FALLS	93	100	APR-SEPT	86	66	80	**93

/13/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE MERWIN, YALE AND SWIFT RESERVOIRS.

/14/ OBSERVED FLOW CORRECTED FOR STORAGE IN RIFFE LAKE AND MAYFIELD RESERVOIR.

/15/ OBSERVED FLOW CORRECTED FOR STORAGE IN DIABLO, ROSS AND GORGE RESERVOIRS.

/16/ OBSERVED FLOW CORRECTED FOR STORAGE IN HOWARD HANSON DAM.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of washington stream basins presents the water content of the snow about APRIL 1, 1985, as percent of the same date in 1984 and average of record.

Tributary Basin	No. of Courses	1985 Snow Water Expressed as percent of 1984	Average 1961-80
		UPPER COLUMBIA BASIN	
Pend Oreille	11	128	102
Kettle	10	96	88
Colville	3	115	122
Spokane	7	153	105
Okanogan	24	108	87
Methow	2	122	91
Chelan	4	106	98
Entiat	9	94	59
Wenatchee	9	140	97
Yakima	15	126	99
Ahtanum	2	69	50
		LOWER COLUMBIA BASIN	
Mill Creek	1	130	130
Cowlitz	7	119	103
		PUGET SOUND	
White	3	107	90
Green	10	173	115
Snoqualmie	1	224	146
Skykomish	2	124	105
Skagit	13	148	86
Baker	0		
		OLYMPIC PENNINSULA	
Morse	1	123	97
Elwha	1	140	84
Dungeness	1	171	93

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured (APRIL) 1985	1984	1983	Normal*
		COLUMBIA				
Spokane	Coeur d'Alene Lake	225.1	96.1	194.4	163.3	121.6
Columbia	Franklin D. Roosevelt Lake	5232.0	992.0	4455.5	1864.1	1260.0
Columbia	Banks Lake	714.9	672.2	864.8	690.9	590.8
Okanogan	Conconully Reservoir	13.0	13.0	13.0	13.0	7.2
Okanogan	Conconully Lake	10.5	10.4	10.4	10.4	7.5
Chelan	Lake Chelan	676.1	138.6	296.4	295.1	294.2
		YAKIMA				
Yakima	Keechelus Lake	157.8	90.3	145.7	122.3	108.8
Kachess	Kachess Lake	239.0	163.6	221.6	223.3	189.8
Cle Elum	Lake Cle Elum	436.9	191.4	363.2	364.4	292.1
Bumping	Bumping Lake	33.7	3.8	17.6	7.0	8.6
Tieton	Rimrock Lake	198.0	92.7	166.3	145.3	142.2
		PUGET SOUND				
Skagit	Ross Reservoir	1404.1	468.2	887.3	712.9	754.4
Skagit	Diablo Reservoir	90.6	84.6	83.8	88.0	85.7
Skagit	Gorge Reservoir	9.8	8.0	7.5	8.4	8.0

1/ Based on Active Storage
* 15-yr. Average 1963-1977

PRECIPITATION 1/

Division Average Observations and Departures

Drainage Divisions	Fall Sept-Oct Observed	Fall 1984 2/ Departures	Winter Nov. 1984 - Observed	Winter Mar. 1985 2/ Departures
Northeastern Wash	1.83	-0.65	9.02	-0.23
Southeastern Wash	2.22	-0.29	10.00	-0.20
East slope Cascade	3.24	-1.51	20.04	-7.31
North Central Wash	1.54	-0.05	4.78	-1.58
Northwest Cascade	11.98	-1.23	40.18	-15.10
Southwest Cascade	8.89	-4.59	28.96	-11.51

Northeastern Washington	- Lower Spokane, Colville, Sanpoil, and Lower Kettle Drainages.
Southeastern Washington	- Touchet, Tucannon, and Palouse Drainages
East Slope Cascades	- Yakima, Wenatchee, and Chelan Drainages
North Central Washington	- Methow and Okanogan Drainages
Northwest Slope Cascades	- Puget Sound Drainages
Southwest Slope Cascades	- Lower Columbia Drainages

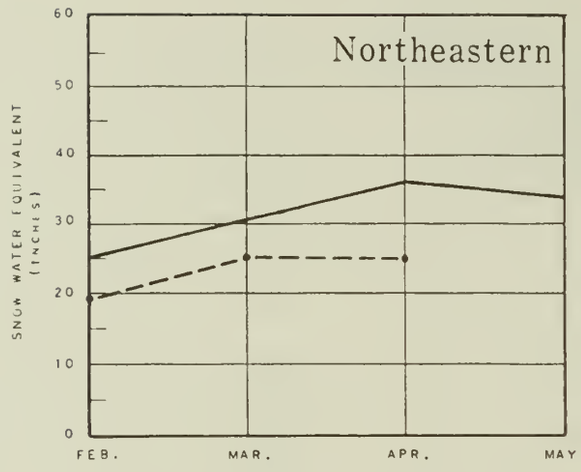
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service

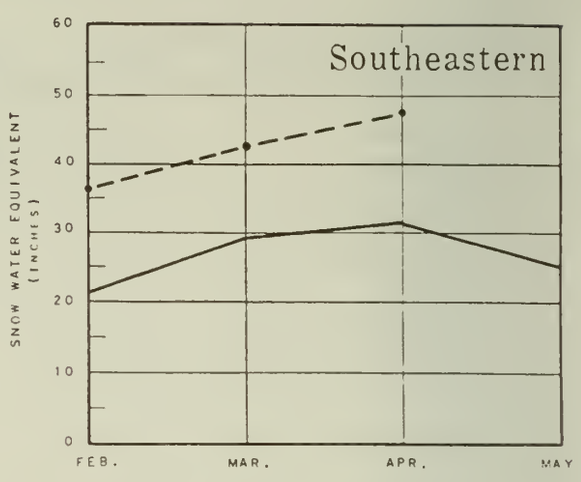
2/ - Departure from 20-year (1961-1980) drainage division average

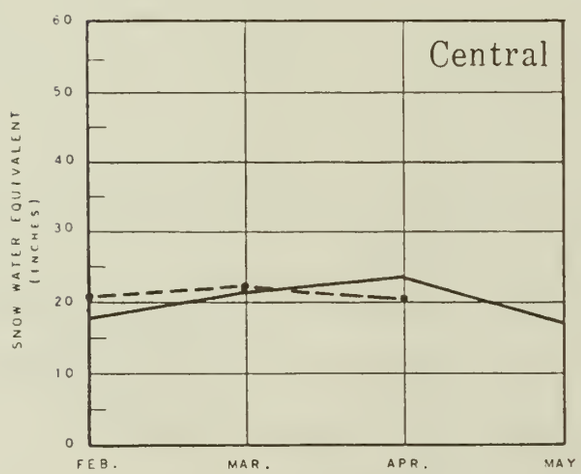
WASHINGTON SNOW COVER

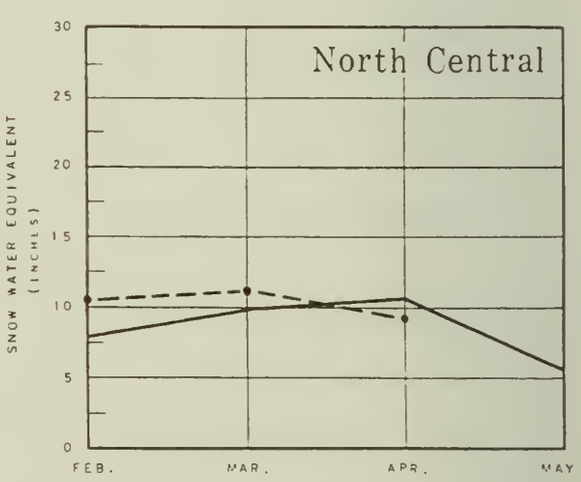
1985

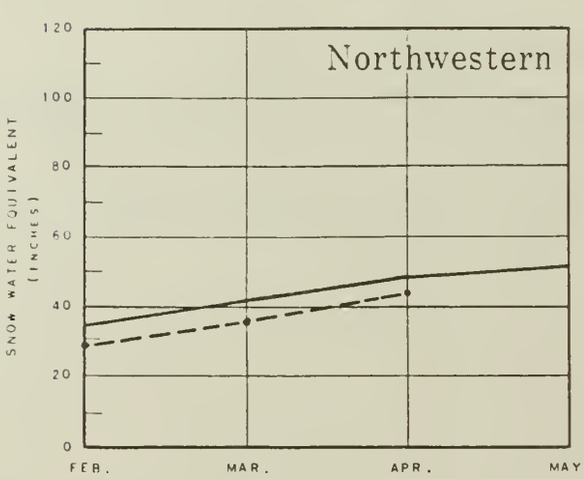
DRAINAGE AREAS

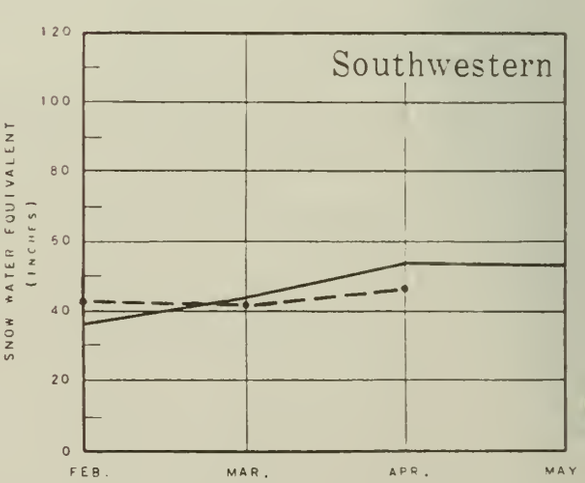












Average ———
1985 – – – –

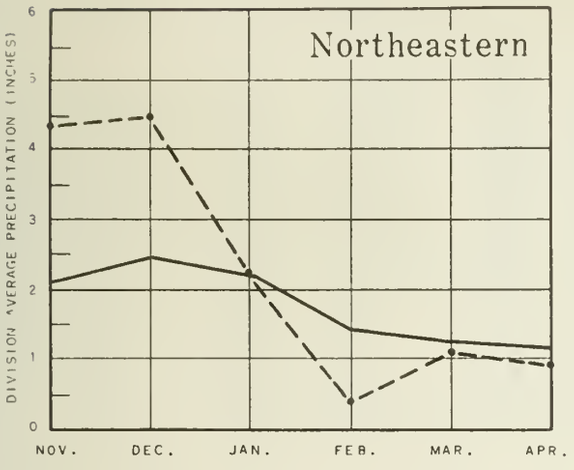
Selected Snow Survey Courses by Soil Conservation Service

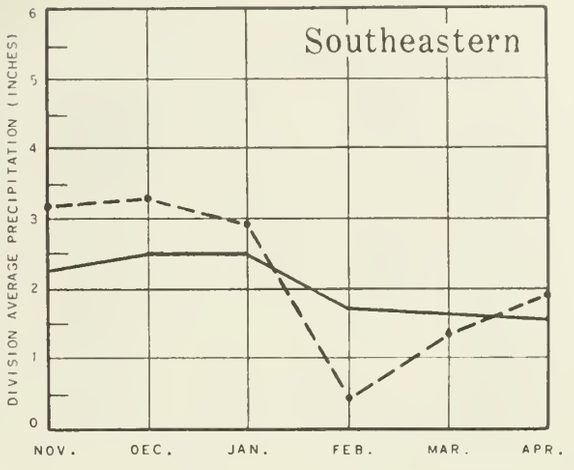
M7-L-22028G

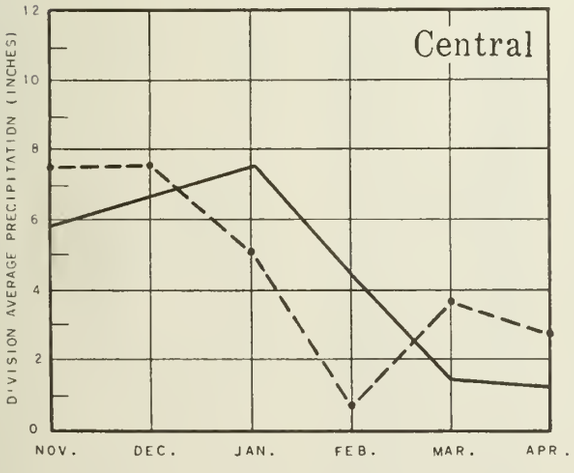
WASHINGTON VALLEY PRECIPITATION

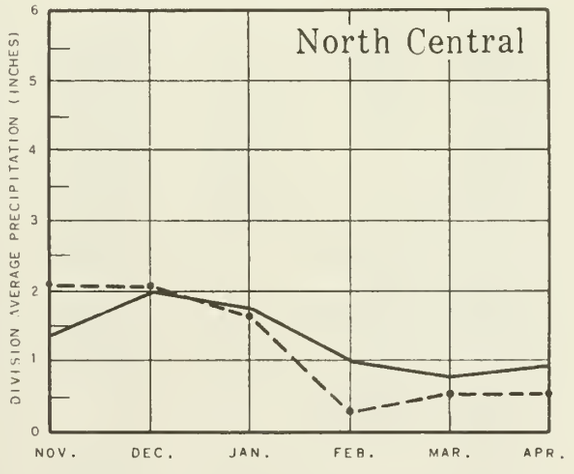
1985

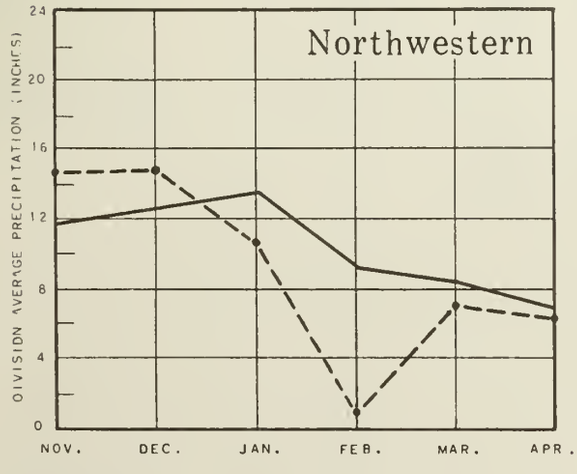
DRAINAGE AREAS

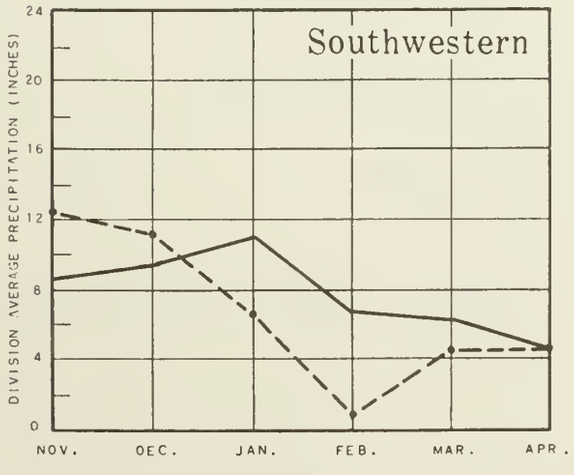












Average ———
1985 – – – –

Preliminary Analysis by National Weather Service

NOTE: Precipitation to beginning of the month.

SNOW DATA TO APRIL 1, 1985 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #
UPPER COLUMBIA DRAINAGE							
PEND OREILLE RIVER							
Benton Meadow	16A02	2344	3/28	28	8.6	0.0	4.9
Benton Spring	16A03	4900	3/28	69	22.7	15.3	19.8
Boyer Mtn	17A02	5250	4/01	76	27.7	25.2	27.0
Bunchgrass Meadow	17A01	5000	4/05	80	26.6	28.5	30.6
Chewelah	17A04	4925	3/30	56	17.8	17.1	14.7
Hoodoo Basin	15C10	6000	3/29	124	52.4	39.3	52.7
Hoodoo Creek	15C01	5900	3/29	113	46.4	36.2	49.2
Lookout	15B02	5250	3/28	101	37.9	25.4	36.3
Nelson	2D04CA	3050	3/27	52	16.9	8.8	16.1
Schweitzer Bowl	16A06	4500	4/02	76	31.2	22.8	30.2
Schweitzer Ridge	16A05	6100	4/02	112	46.3	42.7	47.9
KETTLE RIVER							
Barnes Creek	2B06CA	5300	3/26	56	18.6	18.9	20.9
Big White Mtn.	2E03CA	5500	3/31	57	17.6	20.4	20.3
Butte Creek	18A03	4070	3/31	37	9.6	11.6	9.6
Carmi	2E02CA	4100	4/01	20	4.9	5.7	6.6
Farron #1	2B02CA	4000	3/26	39	12.6	13.3	14.1
Farron #2	2B02ACA	4000	Not Measured				
Goat Creek	18A04	3595	3/31	21	4.6	.1	5.5
Monashee Pass	2E01CA	4500	3/26	42	11.2	12.6	14.3
Summit G.S.	18A05	2150	3/31	37	9.1	11.4	8.6
Trapping Creek Lower	2E05CA	3050	4/01	12	3.4	2.6	3.9
Trapping Creek Upper	2E04CA	4450	3/31	29	6.9	8.3	10.2
COLVILLE RIVER							
Baird	17A06	3215	3/31	33	10.6	6.5	5.7
Chewelah	17A04	4925	3/30	57	17.8	17.1	14.7
Togo	18A10	3370	3/30	44	11.9	11.4	12.6
OMAK LAKE, TWIN LAKES							
Mission	19A11	1150	3/26	0	0		
Mount Tolman	18A12	2000	3/26	0	0		
Twin Lake	18A11	2700	3/26	25	7.9		

Average based on 1961-1980 averages
sp SNOTEL data

WSFB-X4-L

SNOW DATA TO APRIL 1, 1985 - APPENDIX 2

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
SPOKANE RIVER							
Above Burke	15B08	4100	3/28	65	24.9	14.2	24.0
4th of July Summit	16B03	3100	3/28	43	15.9	5.0	7.9
Lookout	15B02	5250	3/28	101	37.9	25.4	36.3
Lost lake	15B14A	6000	4/02	148	59.9	41.2	58.3
Mosquito Ridge	16A04	5110	4/02	98	39.4	28.2	38.9
Sherwin	16C01	3200	3/28	46	15.9	9.2	13.2
Sunset	15B09A	5600	4/02	82	30.0	22.6	34.3
NEWMAN LAKE							
Ragged Ridge	17B02	3333	3/25	33	10.0	0	New
OKANOGAN RIVER							
Aberdeen Lake	1F01CA	4300	3/29	20	5.8	4.6	6.2
Blackwall Peak	2G03CA	6250	3/29	81	28.1	24.9	35.0
Brenda Mine	2F18CA	4800	3/29	45	13.8E	13.2	13.3
Brookmere	1C01CA	3200	3/31	32	7.7	4.2	9.5
Enderby	1F04CA	6250	3/28	88	33.1	40.0	38.9
Esperon Creek Lower	2F15CA	4400	3/31	39	10.6		7.8
Esperon Creek Middle	2F15CA	4700	3/31	47	13.9		14.8
Esperon Creek Upper	2F13CA	5400	3/31	52	16.1		
Grayback Reservoir	2F08CA	5225	3/28	33	7.8	11.6	9.0
Hamilton Hill	2G06CA	4900	3/27	46	12.9	7.4	16.0
Harts Pass	20A05A	6500	3/29	76	33.5	33.1	46.4
Isintok Lake	2F11CA	6300	3/29	29	6.3	5.5	7.9
Lost Horse Mountain	2G04CA	7000	3/29	39	10.6	4.3	9.7
McCulloch	2F03CA	4200	3/29	25	6.4	5.0	6.9
Missezula Mtn.	2G05CA	5100	3/28	37	9.8		9.7
Mission Creek	2F05CA	6000	3/29	56	17.3	20.2	20.7
Monashee Pass	2E01CA	4500	3/26	42	11.2	12.6	14.3
Mount Kobau	2F12CA	5960	3/31	50	12.8	10.9	12.0

Average based on 1961-1980 averages
s SNOTEL data

WSFB-X4-L

SNOW DATA TO APRIL 1, 1985 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
OKANOGAN RIVER (CONT.)							
Mutton Creek No. 1	19A01	5700	3/26	35	10.8		11.8
Mutton Creek No.2 SP	19A11	6000	Not Measured				New
Nickel Plate	2G02CAN	6200	3/29	31	8.2	6.7	9.1
Oyama Lake	2F19CAN	4400	3/29	29	8.5	6.3	7.3
Postill Lake	2F07CAN	4500	3/29	32	7.7	8.3	9.1
Rusty Creek	19A03	4000	3/26	20	5.6	6.1	6.4
Salmon Meadows	19A02	4500	4/01	28	7.2		9.8
Silver Star Mountain	2F10CAN	6050	3/31	74	27.8	28.0	29.1
Summerland Reservoir	2F02CAN	4200	3/29	39	9.4	7.8	9.8
Sunday Summit	2G01CAN	4300	3/26	17	4.7	.4	5.2
Trout Creek	2F01CAN	4700	3/28	29	7.6	3.5	7.6
Vaseux Creek	2F20CAN	4600	3/28	28	5.9	6.9	6.7
White Rocks Mountain	2F09CAN	6000	3/29	57	20.7	23.9	24.2
METHOW RIVER							
Harts Pass	20A05A	6500	3/29	76	33.5	33.1	46.4
Mutton Creek No. 1	19A01	5700	3/26	35	10.8		11.8
Mutton Creek No. 2 SP	19A11	6000	Not Measured				12.4
Rusty Creek	19A03	4000	3/26	20	5.6	6.1	6.4
Salmon Meadows	19A02	4500	3/26	28	7.2		9.8
CHELAN LAKE BASIN							
Cloudy Pass +	20A22	6500	3/28	20	7.1		47.3
Little Meadows +	20A24a	5275	3/28	110	39.6		45.1
Lyman Lake	20A23	5900	3/28	115	42.4	54.6	61.8
Mirror Lake	30A39	5600	3/28	77	24.9	26.7	10.0
Park Creek Ridge	20A12	4600	4/01		39.7	34.8	45.5
Rainy Pass	20A09	4780	4/01		39.2	30.0	41.8

Average based on 1961-1980 averages
+ Aerial stadia observation
sp SNOTEL data

WSFB-X4-L

SNOW DATA TO APRIL 1, 1985 - APPENDIX 4

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
ENTIAT RIVER							
Brief	20B19	1600	3/28				3.8
Entiat Meadows +	20A33	4540	3/31	72	24.5	26.2	49.3
Entiat River Trail +	20A34	3325	3/31	25	8.0	8.2	19.5
Fox Camp +	20A36	6510	3/31	97	35.9	40.0	59.0
Pope Ridge	20B20	3450	3/28	45	14.9	13.7	18.6
Pugh Ridge +	20A32	6725	3/31	57	18.8	23.3	38.5
Shady Pass	20A37	6200	3/28	63	20.7	24.4	31.4
Snow Brushy +	20A35	3910	3/31	81	28.4	29.8	35.3
Tommy Creek +	20B21	4900	3/31	50	16.0	14.2	25.9
WENATCHEE RIVER							
Berne Mill Creek	21B23	3170	3/28	76	27.0	18.8	28.7
Berne Mill Creek SP	21B41	3240	3/28	67	24.7	13.6	26.7
Blewett Pass No. 2	20B02	4270	4/01		20.9	11.8	16.4
Chiwaukum G. S.	20B16	1810	3/28	31	10.0		15.9
Lake Wenatchee	20B05	1970	Watershed Logged		Discontinued		
Lyman Lake	20A23	5900	4/01		51.2	54.6	61.8
Merritt	20B18	2140	3/28	39	14.6		
Stevens Pass	21B01	4070	3/28	119	46.2	40.3	53.0
Stevens Pass Sand Shed	21B45	3700	3/28	85	32.3	25.0	37.5
COLOCKUM CREEK							
Trough #2(SP)	20B25	5310	4/01		9.1sp	3.3	11.9

+ Aerial stadia observation
# Average based on 1961-1980 averages
sp SNOTEL data

WSFB-X4-L

SNOW DATA TO APRIL 1 , 1985 - APPENDIX 5

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #
SQUILCHUCK CREEK							
Beehive Springs	20B03	4400	3/29	25	7.5	5.1	7.9
Scout-a-Vista	20B04	3400	Not Measured				
STEMILT CREEK							
Stimelt Slide	20B06	5000	3/29	34	11.3	9.7	13.6
Upper Wheeler	20B07	4400	3/29	24	6.9	11.0	9.9
YAKIMA RIVER							
Ahtanum R.S.	21C11	3100	3/25	20	6.9	3.2	5.8
Big Boulder Creek	21B09	3200	3/26	56	19.6	12.6	18.4
Blewet Pass No. 2	20B02	4270	4/01	43	17.7	11.8	16.4
Bumping Lake Old	21C08	3450	3/28	47	15.1	9.0	15.7
Bumping Lake New	21C36	3400	3/28	52	18.1	12.6	20.6
Cayuse Pass	21C06	5300	3/28	190	74.9	78.6	88.1
Colockum Pass	20B09	5370	4/01	42	15.4	16.8	14.2
Corral Pass	21B13	6000	3/30	102	46.0	31.2	41.3
Fish Lake	21B04	3371	4/01	72	27.3	26.9	34.0
Green Lake	21C10	6000	4/01		13.2sp	26.0	34.6
Grouse Camp	20B11	5385	4/01		17.3sp	15.6	17.1
Lake Cle Elum	21B14	2200	3/27	20	6.6		5.5
Morse Lake	21C17	5400	4/01		46.9sp	46.7	57.5
Olallie Meadows	21B02	3625	3/28	114	45.3	31.7	48.4
Stampede Pass	21B10	3860	4/01		52.3sp	43.5	43.0
Tunnel Avenue	21B08	2450	3/27	57	19.9	11.0	23.7
White Pass E. Side	21C28	4500	3/28	73	23.6	24.4	24.9

Average based on 1961-1980 averages
sp SNOTEL Reading

WSFB-X4-L

SNOW DATA TO APRIL 1, 1985 - APPENDIX 6

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
AHTANUM CREEK							
Ahtanum R. S.	21C11	3100	3/25	20	6.9	3.2	5.8
Green Lake	21C10	6000	4/01		13.2sp	26.0	34.6
LOWER COLUMBIA DRAINAGE							
MILL CREEK							
High Ridge SP	18D19	4890	2/28	76	28.8sp	0.0	
Touchet # 2 SP	17C55	5530	3/01	98	38.7sp		24.0
COWLITZ RIVER							
Cayuse Pass	21C06	5300	3/28	190	74.9	78.6	88.1
White Pass E. Side	21C28	4500	3/28	73	23.6	24.4	24.9
PUGET SOUND DRAINAGE							
WHITE RIVER							
Cayuse Pass	21C06	5300	3/28	190	74.9	78.6	88.1
Corral Pass	21B13	6000	3/30	102	46.0	31.2	43.1
Morse Lake	21C17	5400	4/01		46.9 sp	46.7	57.5
GREEN RIVER							
Airstrip	21B24	1800	4/06	0	0.0		1.6
Charley Creek	21B25	1200	3/02	0	0.0	0.0	0.0
Cougar Mountain	21B42	3200	4/01		31.4sp	12.2	20.6
Grass Mtn. No. 2	21B27	2900	4/06	44	17.7	1.0	21.4
Grass Mtn. No. 3	21B28	2100	4/06	0	0	10.0	3.9
Lester Creek	21B29	3100	4/06	68	28.2	13.4	25.9
Lynn Lake	21B50	4000	4/06	70	34.9	15.0	25.1
Sawmill Ridge	21B31	4700	4/06	95	44.0	25.8	39.5
Stampede Pass	21B10	3860	4/01		52.3sp	43.5	43.0
Twin Camp	21C30	4100	4/06	66	30.2	17.3	26.4

#, Average based on 1961-1980 averages
sp SNOTEL Reading

WSFB-X4-L

SNOW DATA TO APRIL 1, 1985 - APPENDIX 7

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
SNOQUALMIE RIVER							
Olallie Meadows	21B02	3960	4/01		70.9	31.7	48.4
SKYKOMISH RIVER							
Stevens Pass	21B01	4070	3/28	119	46.2	40.3	53.0
Stevens Pass Sand Shed	21B45	3700	3/28	85	32.3	25.0	37.5
SKAGIT RIVER							
Beaver Creek Trail	21A04	2200	3/31	36	12.0	1.2	13.5
Beaver Pass	21A01	3680	3/31	79	28.0	17.9	32.2
Brown Top Ridge	21A28	6000	3/29	132	50.8	46.8	65.7
Devils Park	20A04	5900	3/29	94	34.6	27.6	45.8
Freezeout Creek Trail	20A01	3500	3/31	40	13.0	4.8	12.6
Freezeout Meadow	20A38	5040	3/31	75	26.3	17.9	35.7
Granite Creek	21A29	3500	3/31	59	17.6	9.2	19.2
Harts Pass	20A05A	6500	3/29	76	33.5	33.1	46.4
Klesilkwa	3D03ACA	3710	3/26	44	13.0	1.5	13.5
Lightning Lake	3D02CAN	4000	3/26	39	9.8	7.4	14.3
Lyman Lake	20A23	5900	3/28	115	42.4	54.6	61.8
Meadows Cabin	20A08	1900	3/29	17	5.8		5.8
New Hozomeen Lake	21A30	2800	3/31	37	12.5	1.5	13.2
Rainy Pass	20A09	4780	3/31	93	34.0	30.0	41.8
Thunder Basin	20A07	4200	3/29	67	21.2	10.8	23.5

Average based on 1961-1980 averages
sp SNOTEL data

WSFB-X-L

SNOW DATA TO APRIL 1, 1985 - APPENDIX 8

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Last Year	Average #
BAKER RIVER							
Dock Butte +	20A11A	3800				53.0	70.4
Easy Pass +	21A07A	5200				60.0	90.9
Jasper Pass +	21A06A	5400				69.0	89.2
Martin Lake	21A09A	3600				60.0	75.6
Mt. Blum +	21A18A	5800				58.0	63.0
Rocky Creek	21A12A	2100				12.0	29.8
Schreibers Meadow	21A10A	3400				37.0	64.6
S.F. Thunder Creek +	21A14A	2200				0.0	6.6
Watson Lakes	21A08A	4500				48.0	69.1
OLYMPIC PENINSULA DRAINAGE							
DUNGENESS RIVER							
Deer Park	23B04	5200	3/26	61	20.0	11.7	21.4
MORSE CREEK							
Cox Valley	23B14	4500	2/27	90	34.3	26.8	33.9
ELWHA RIVER							
Hurricane	23B03	4500	3/30	65	20.6	14.7	24.4
WYNOOCHEE RIVER							
Carrol Pass	23B15	3650	4/06	98	42.3		

+ Aerial stadia observation
# Average based on 1961-1980 average

WSFB-X4-L

SNOTEL READINGS, APRIL 1, 1985 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *
PEND OREILLE RIVER							
Bunchgrass Meadows	17A01	5000	03/15		21.8	23.1	
	GT		03/29	76	27.7		
			03/31		21.0	26.2	38.3
OKANOGAN & METHOW RIVERS							
Harts Pass	20A05	6500	03/15		36.6	30.6	
	GT		03/29	92	33.0		
			04/01		42.2	34.7	48.6
Salmon Meadows	19A02	4500	03/15		13.2	17.6	
			04/01		8.1	20.5	32.2
CHELAN LAKE BASIN							
Lyman Lake	20A23	5900	03/15		45.7	55.7	
	GT		03/28	115	42.4		
			04/01		51.2	62.1	65.3
Mirror Lake	20A39	5600	03/15		22.9	25.9	
	GT		03/28	77	24.9		
			04/01		25.1	28.5	39.5
Park Creek Ridge	20A12	4600	03/15		36.0	32.6	
	GT		03/28	92	35.8		
			04/01		39.7	35.3	48.3
Rainy Pass	20A09	4780	03/15		33.8		
	GT		.3/31		28.0		
			03/31		37.5	32.3	45.2
ENTIAT RIVER							
Pope Ridge	20B20	3450	03/15		15.7	16.8	
	GT		03/28	47	15.5		
			04/01		16.1	15.7	16.9
WENATCHEE RIVER							
Blewett Pass	20B02	4270	03/15		18.2	17.9	
	GT		04/01	43	17.7		
			04/01		20.9	18.4	21.0
Lyman Lake	20A23	5900	03/15		45.7	55.7	
	GT		03/28	115	42.4		
			04/01		51.2	62.1	65.3
Stevens Pass	21B01	4070	03/15		46.9	33.2	
	GT		03/28	119	46.2		
			04/01		50.9	37.1	23.9
Trough # 2	20B25	5300	03/15		9.0	2.8	
	GT		03/29	34	9.5		
			04/01		9.1	2.0	24.1

GT = Ground Truth measurement at SNOTEL site

WSFB-A4-L

SNOTEL READINGS, APRIL 1, 1985 - APPENDIX 2

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average
COLOCKUM CREEK							
Trough # 2	20B25	5300	03/15		9.0	2.8	
	GT		03/29	34	9.5		
			04/01		9.1	2.0	24.1
STEMILT CREEK							
Upper Wheeler	20B07	4400	03/15		10.4	13.3	
	GT		03/28	45	11.5		
			04/01		11.2	20.0	18.7
YAKIMA RIVER							
Big Boulder Creek	21B09	3200	DISCONTINUED				
Bumping Ridge	21C38	4600	03/15		28.9	26.4	
	GT		03/28	87	29.4		
			03/31		32.4	27.9	
Corral Pass	21B13	6000	03/15				
	GT		03/30	102	46.1		
			03/31				26.5
Fish Lake	21B04	3371	03/15		30.7	27.5	
	GT		03/26	81	27.6		
			04/01		35.5	28.5	
Green Lake	21C10	6000	03/15		12.6	17.4	
	GT						
			04/01		13.2	18.3	34.2
Grouse Camp	20B11	5385	03/15		15.3.	16.2	
	GT						
			04/01		17.3	17.6	27.3
Morse Lake	21C17	5400	03/15		40.3	50.0	
			04/01		46.9	55.8	80.0
Sasse Ridge	21C40	4400	03/15				
	GT		03/25	94	31.2		
			04/01				
White Pass E. Side	21C28	4500	03/15		23.6	22.0	
	GT		03/28	73	23.6		
			04/01		25.9	23.4	27.0

GT = Ground Truth measurement at SNOTEL site

WSFB-X4-L

SNOTEL READINGS, APRIL 1, 1985 - APPENDIX 3

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average *
AHTANUM CREEK							
Green Lake	21C10	6000	03/15		12.6	17.4	
	GT						
			04/01		13.2	18.3	34.2
TOUCHET RIVER							
Touchet # 2	17C5	5530	03/15		43.9	28.2	
	GT		03/28	104	40.2		
			04/01		47.8	32.5	37.9
LEWIS RIVER							
June Lake	22C09	3200	03/15		46.2		
	GT						
			04/01		54.9		26.0
Lone Pine Shelter	21C26	3800	03/15		37.3	32.5	
	GT						
			04/01		38.5	34.4	44.9
Plains of Abraham	22C01	4400	03/15		76.7	72.8	
			04/01		91.5	83.0	
Sheep Canyon	22C10	4050	03/15		53.6	33.8	
			04/01		67.8	37.7	
Spencer Meadow	21C20	3400	03/15			19.0	
			04/01			20.7	30.2
Surprise Lake	21C13	4250	03/15		51.6	47.8	
	GT						
			03/30		61.5	55.7	55.7
COWLITZ RIVER							
Pigtail Peak	21C33	5900	03/15		41.8	39.3	
	GT		03/31	119	45.0		
			04/01		43.7	44.7	45.8
Potato Hill	21C14	4500	03/15		31.7	20.0	
	GT						
			03/31		34.2	20.8	
Sheep Canyon	22C10	4050	03/15		53.6	33.8	
			04/01		67.8	37.7	15.7
Strawberry Landing	22C08	3280	03/15		54.4		
	GT						
			04/01		67.8		32.8
Steppes PC	22C11		03/15				
			03/31				
Spirit PC	22C12		03/15		22.3		
			04/01		17.0		

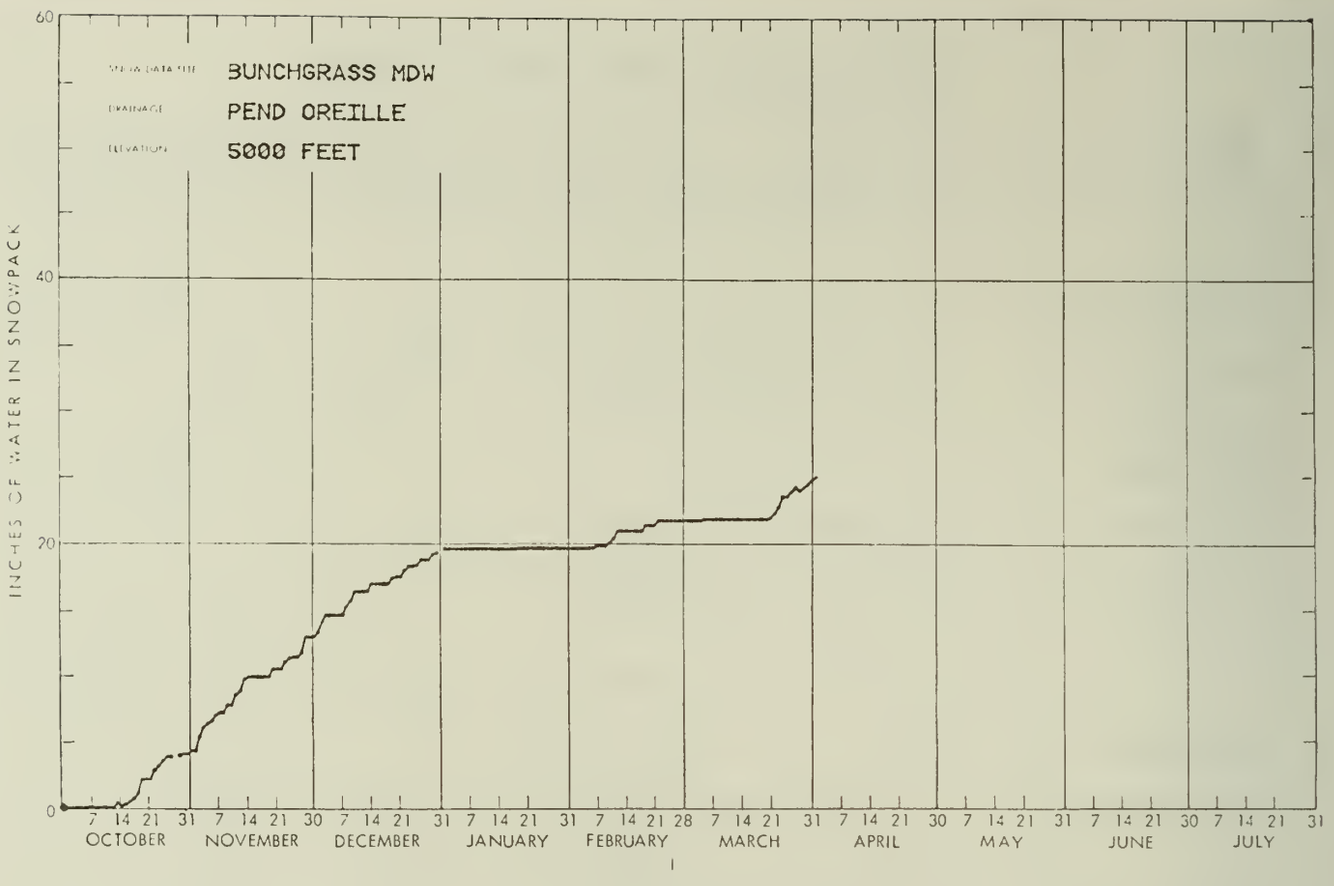
GT = Ground Truth measurement at SNOTEL sites

WSFB-84-L

SNOTEL READINGS, APRIL 1, 1985 - APPENDIX 4

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average
NISQUALLY RIVER							
Paradise Park	21C35	5500	03/15		66.8	28.0	
			04/01		73.1	24.5	
WHITE RIVER							
Corral Pass	21B13	6000	03/15				
	GT		03/30	102	46.0		
			03/31				
Morse Lake	21C17	5400	03/15		40.3	50.8	
	GT						
			04/01		46.9	55.8	80.0
GREEN RIVER							
Cougar Mountain	21B42	3200	03/14		28.4	13.9	
	GT		03/30	83	30.0		
			004201		31.4	26.5	
Stampede Pass	21B10	3960	03/15		43.9	38.6	
	GT		04/01	117	52.0		
			04/01		52.3	42.7	36.2
SNOQUALMIE RIVER							
Olallie Meadows East	21B55	3960	03/15		60.7	45.2	
			03/31		71.3	50.7	49.7

GT = Ground Truth measurements at SNOTEL sites


SNOW DATA SITE
BUNCHGRASS MDW
DRAINAGE
PEND OREILLE
ELEVATION
5000 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
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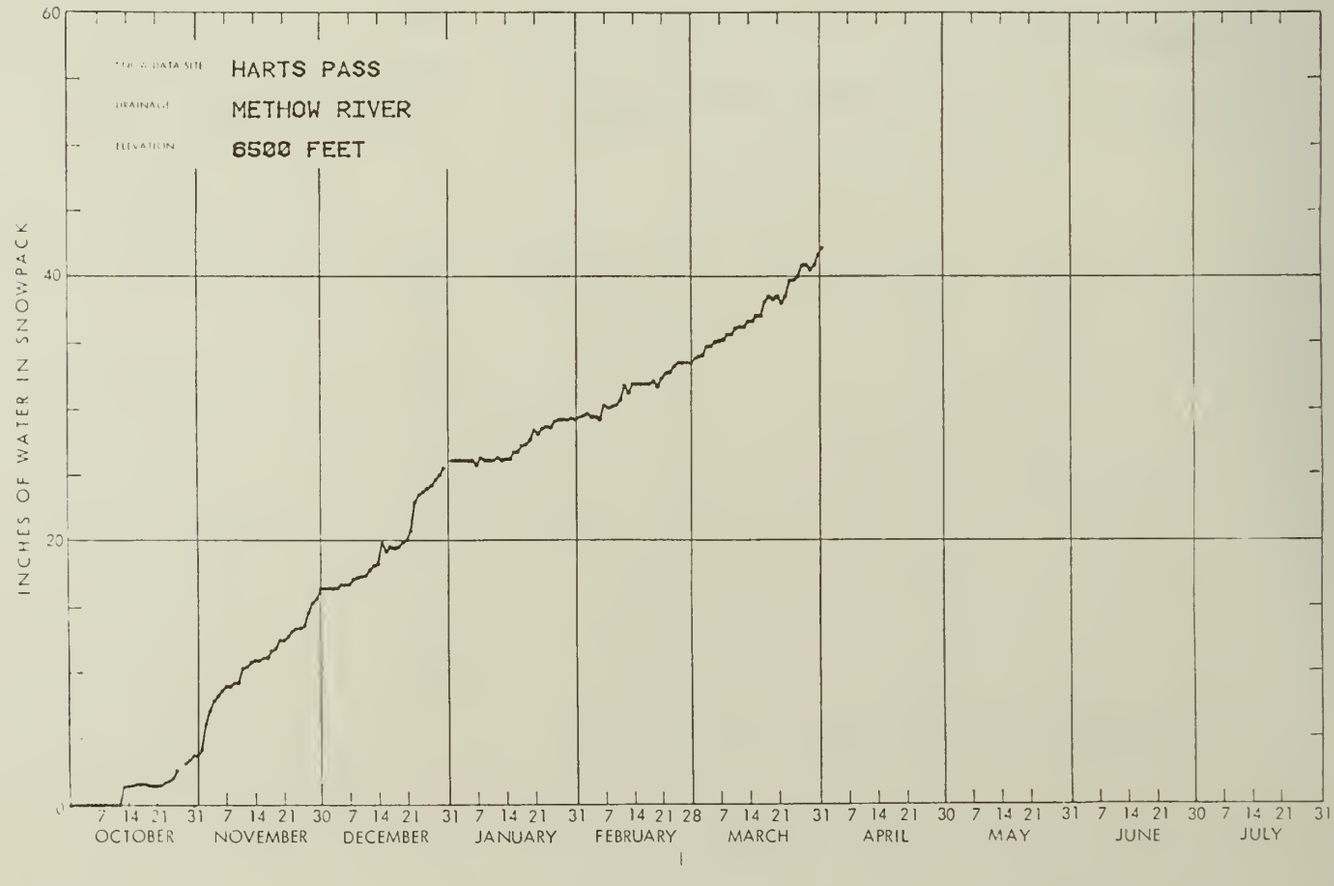
JUNE
JULY


SNOW DATA SITE
HARTS PASS
DRAINAGE
METHOW RIVER
ELEVATION
6500 FEET
INCHES OF WATER IN SNOWPACK
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7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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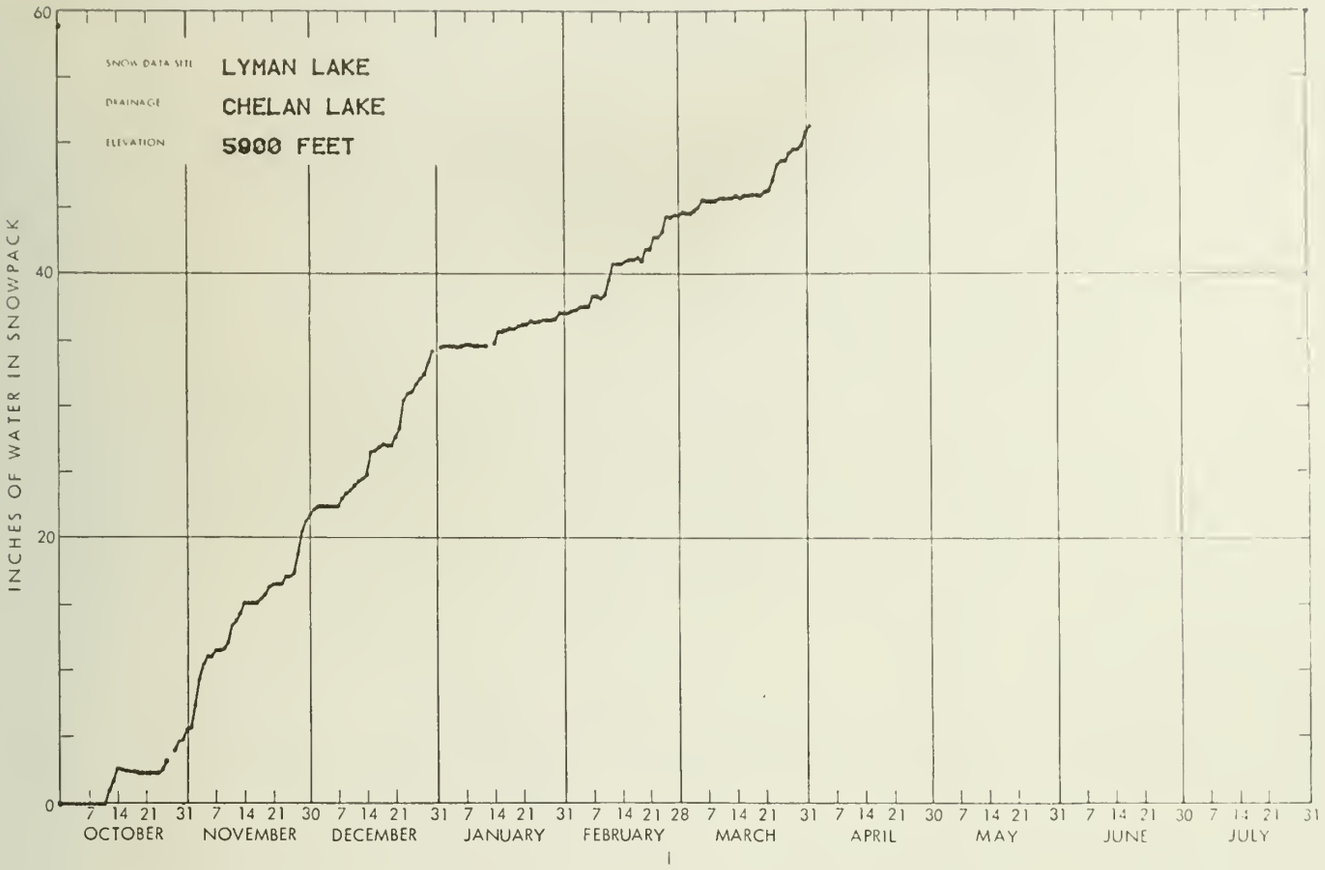
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE
LYMAN LAKE
DRAINAGE
CHELAN LAKE
ELEVATION
5900 FEET
INCHES OF WATER IN SNOWPACK
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7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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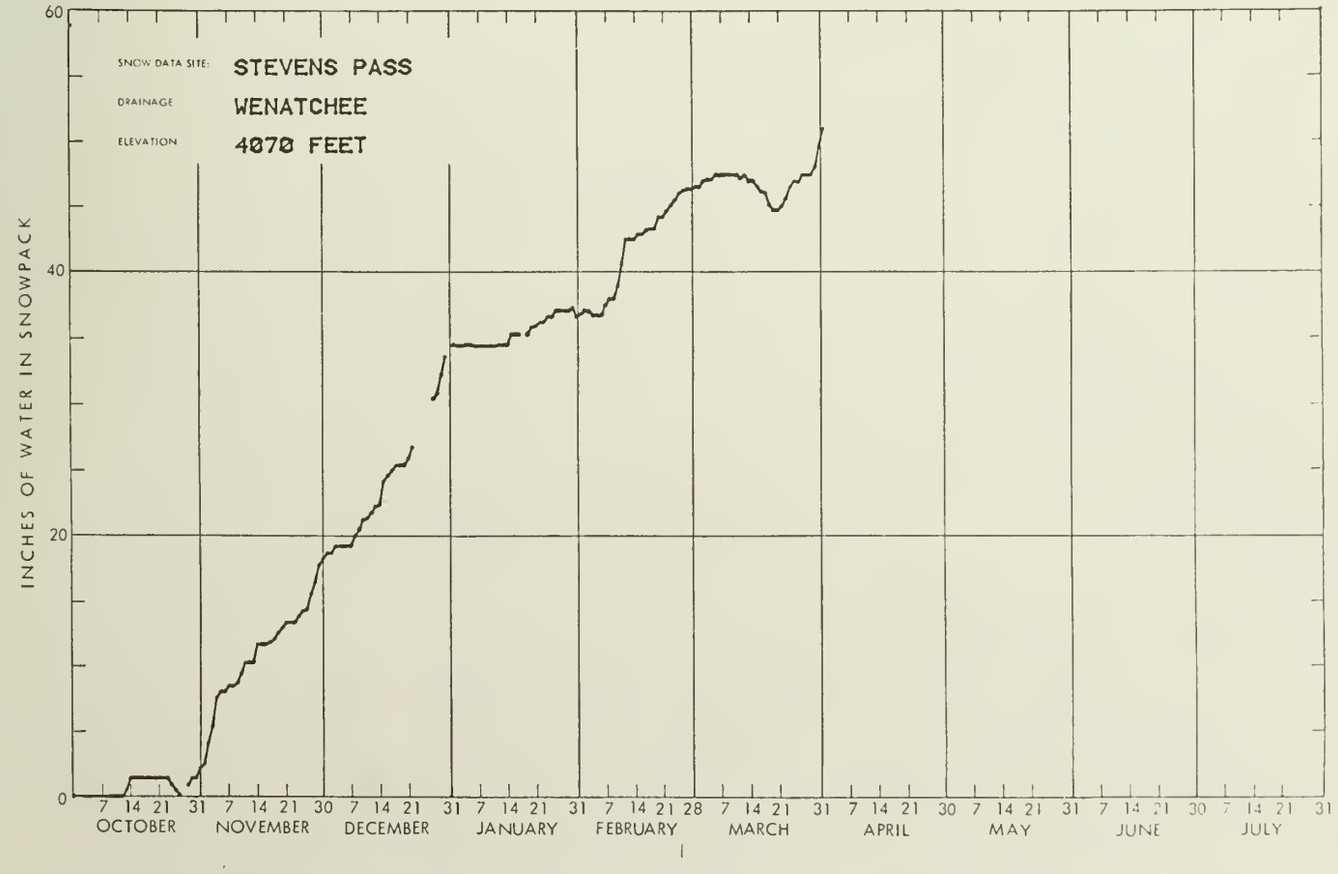
SNOW DATA SITE:
STEVENS PASS
DRAINAGE
WENATCHEE
ELEVATION
4070 FEET
INCHES OF WATER IN SNOWPACK
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40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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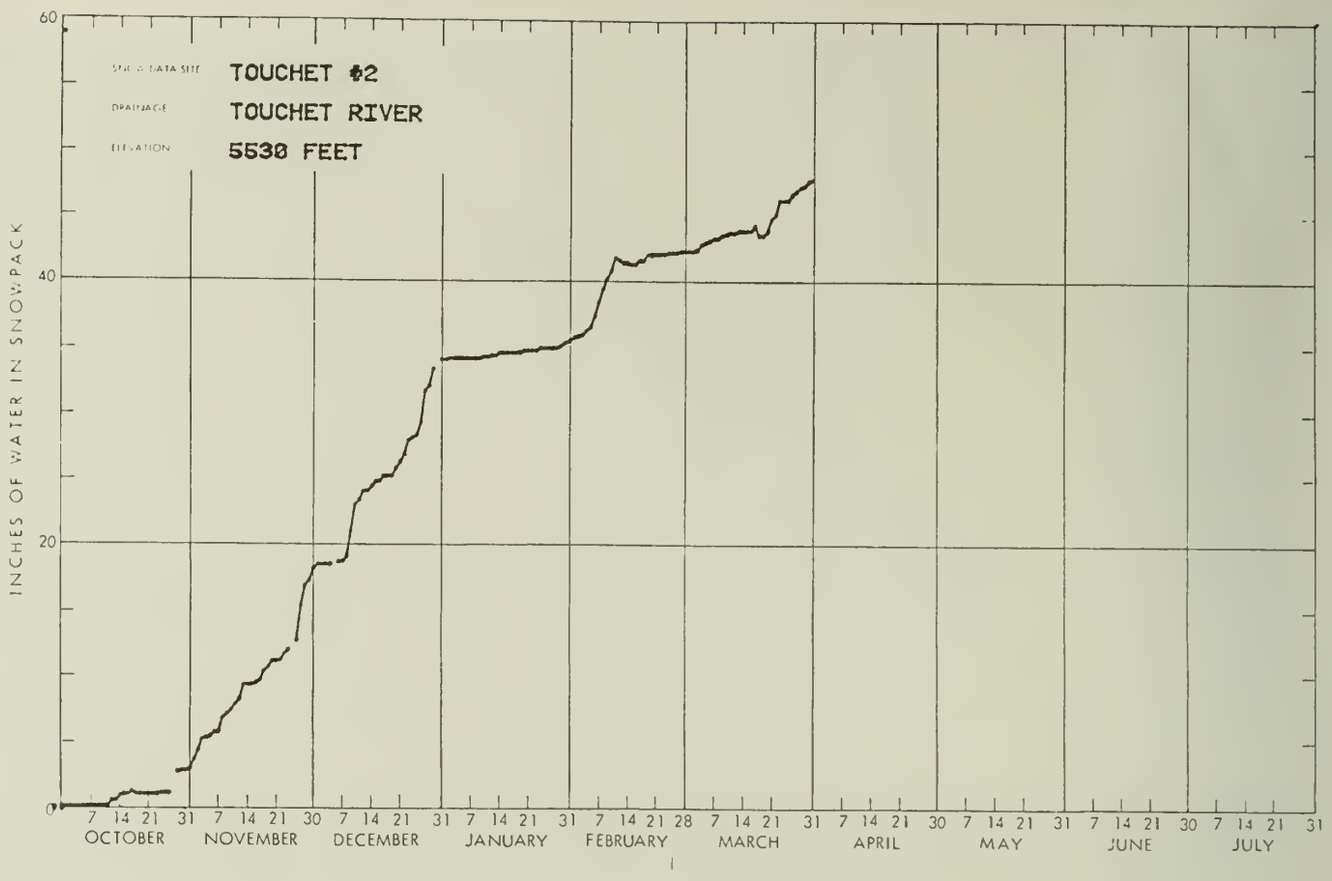
SNOW DATA SITE
TOUCHET #2
DRAINAGE
TOUCHET RIVER
ELEVATION
5530 FEET
INCHES OF WATER IN SNOWPACK
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40
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0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
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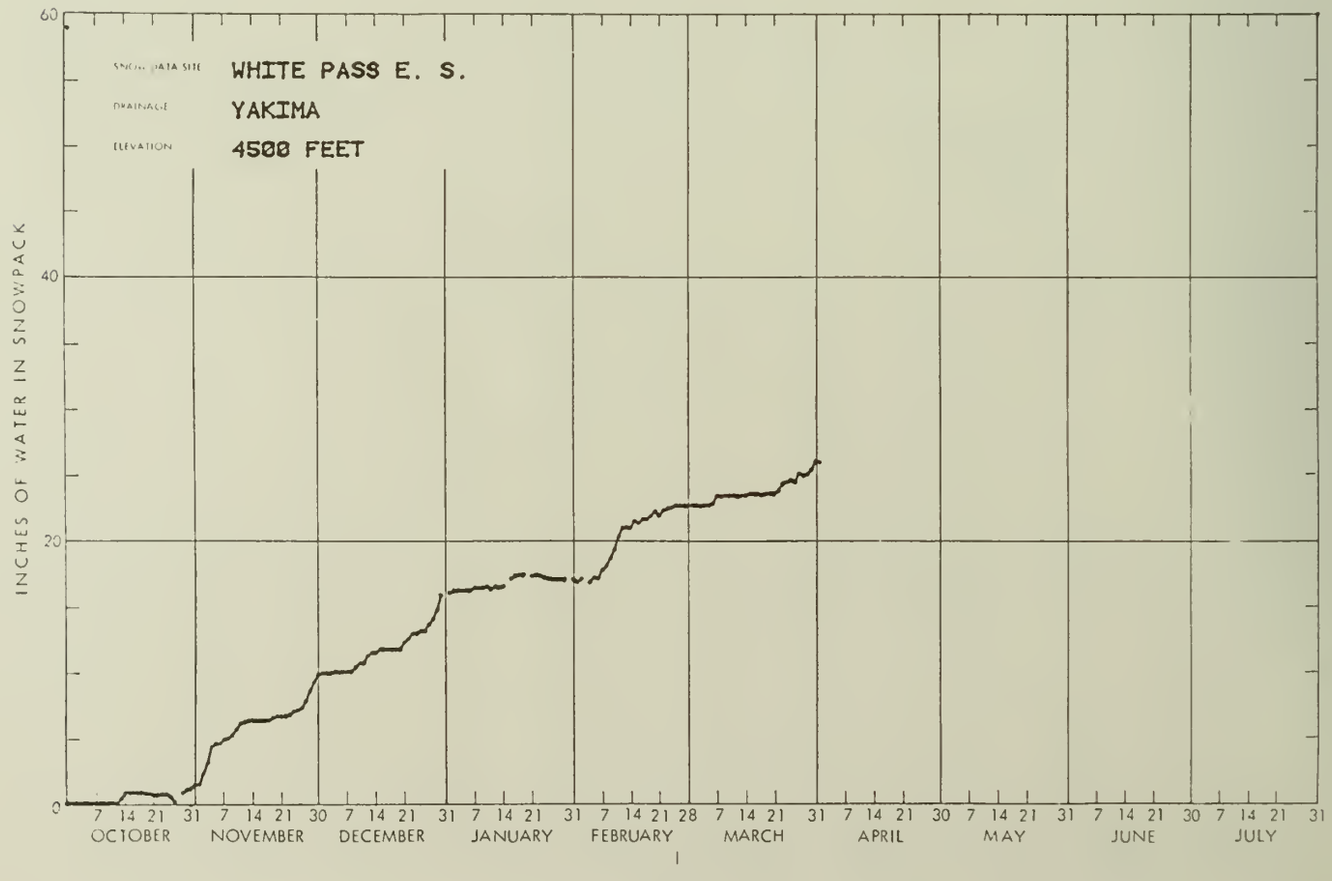
SNOW DATA SITE
WHITE PASS E. S.
DRAINAGE
YAKIMA
ELEVATION
4500 FEET
INCHES OF WATER IN SNOWPACK
60
40
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0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
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MAY
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Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Ministry of the Environment, Water
Investigations Branch, Victoria, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
Corps of Engineers
U.S. Department of Agriculture
Forest Service
U.S. Department of Commerce
NOAA, National Weather Service
U.S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Geological Survey
National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation , navigation , mining and industry

"The Conservation of Water begins with the Snow Survey"

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Agriculture

**Soil
Conservation
Service**

Spokane,
Washington

Water Supply Outlook for Washington

as of MAY 1, 1985

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TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: "Snow scene along trail to Mt. Hood test site snow course"

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P.O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	P.O. Box 98, Bozeman, Montana 59715
Nevada	P.O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4402 Federal Bldg., 125 South State St., Salt Lake City, Utah 84147
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P.O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 — for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 — for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 — and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.

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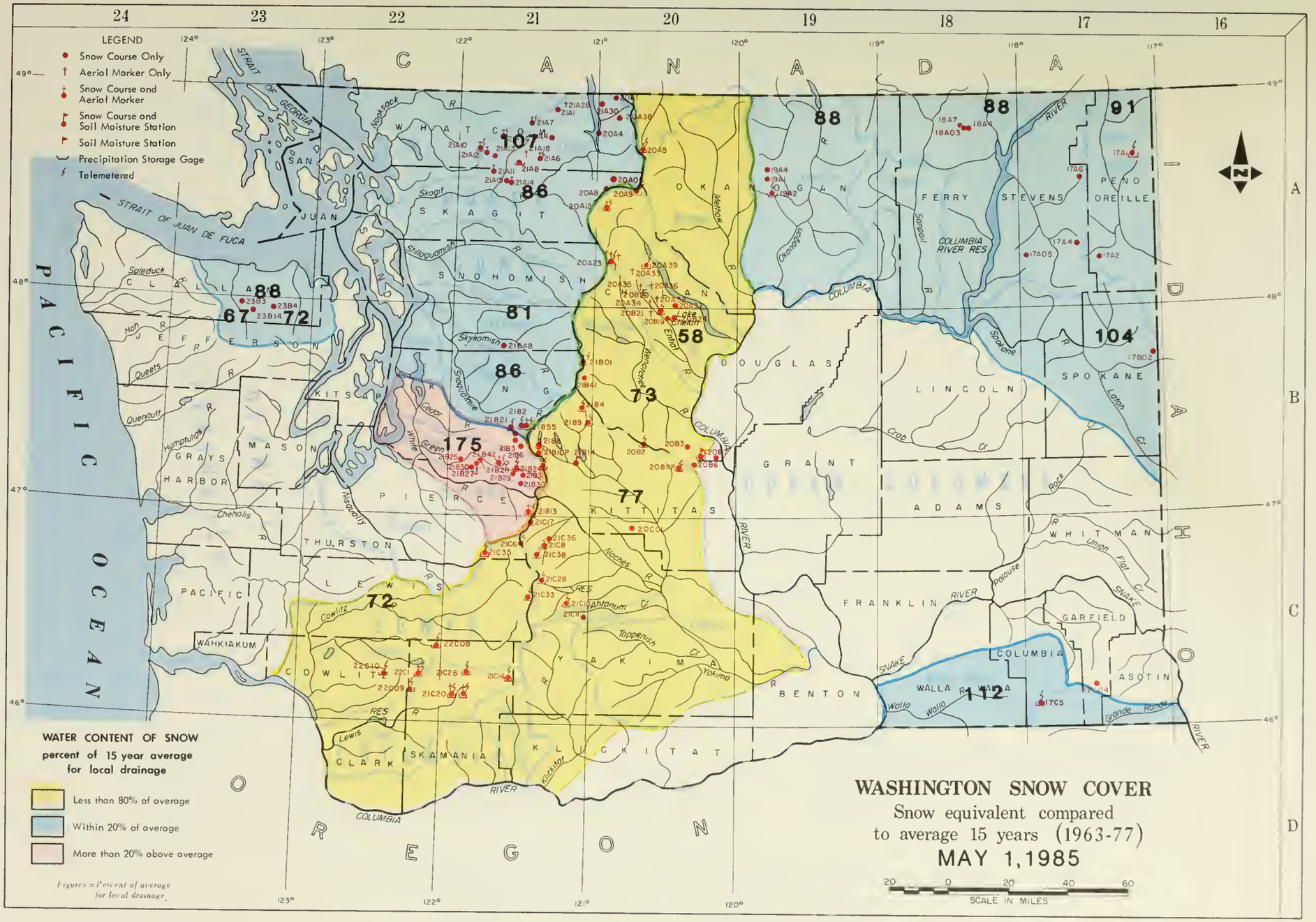


INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

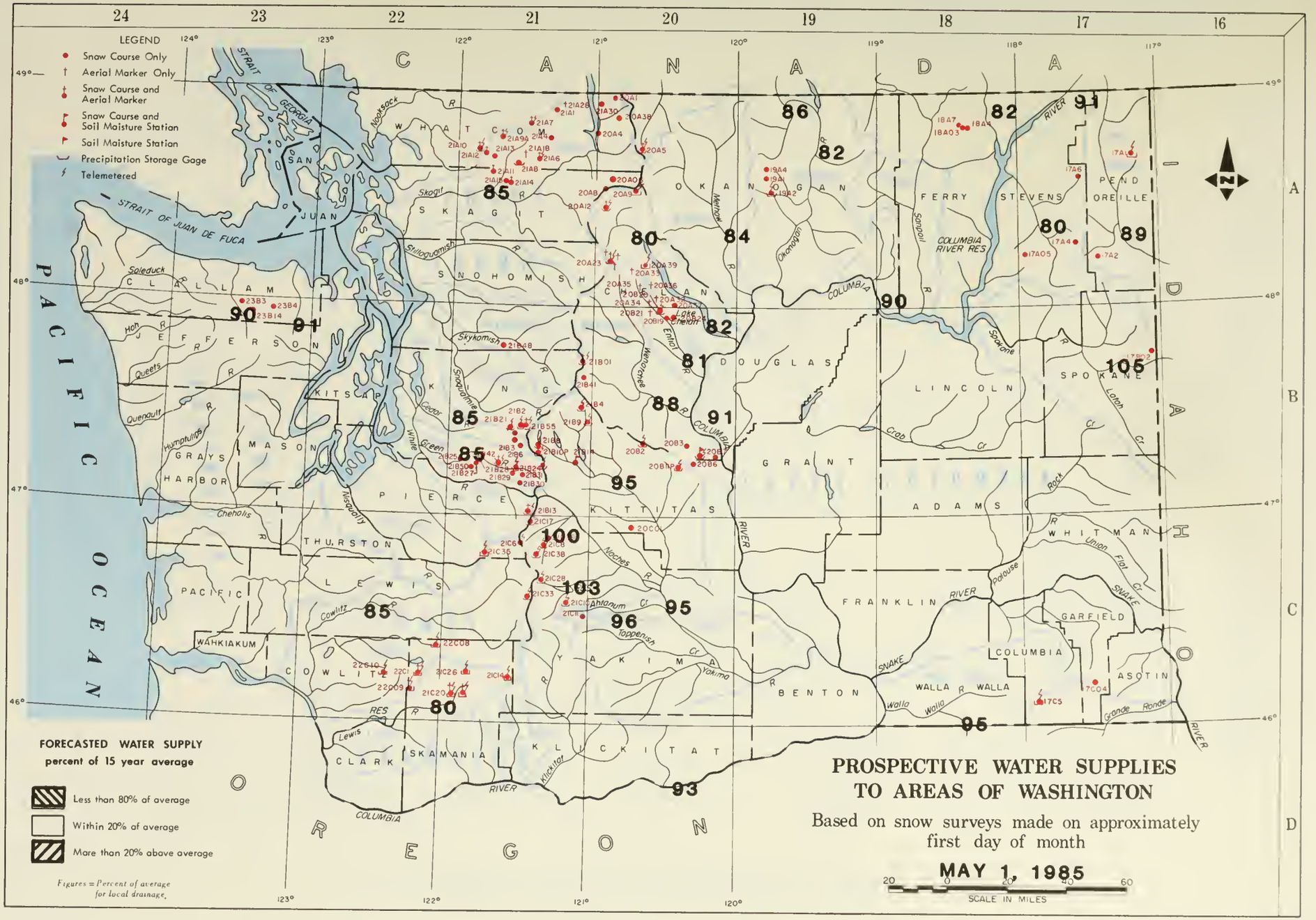
NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
UPPER COLUMBIA DRAINAGE					
Pend Oreille River					
Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Kettle River					
Summit G. S.	18A7	20	39N	35E	4600
Butte Creek	18A3	28	39N	35E	4070
Goat Creek	18A4	26	39N	35E	3595
Spokane River					
Ragged Ridge	17B02	12	27N	45E	3333
Calville River					
Baird	17A6	19	36N	42E	3215
Stranger Mauntain	17A5	26	31N	38E	4990
Chewelah	17A4	11	32N	41E	4925
Okanagan River					
Muttan Creek No. 1	19A1	30	37N	24E	5700
Muttan Creek No. 2	19A4	19	37N	24E	6000
Salman Meadaws	19A2SP	33	37N	24E	4500
Methaw River					
Harts Pass	20A5SP	7	37N	18E	6500
Chelan Lake Basin					
Lyman Lake	20A23SP	18	31N	16E	5900
Pork Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Mirrar Lake	20A39	30	31N	18E	5600
Entiat River					
Brief	20819	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Fax Camp	20A36a	17	30N	18E	6510
Pope Ridge	20820	22	29N	18E	3540
Pape Ridge Snow Pillow	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tammy Creek	20B21a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	20B2 SP	35	22N	17E	4270
Stevens Pass	21B1SP	14	26N	13E	4070
Traugh #2	20B25SP	10	20N	20E	5310
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Stemilt Creek					
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20B7SP	30	21N	20E	4400
Yakima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Fish Lake	2184SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grause Camp	20B11SP	29	21N	19E	5385
Lake Cle Elum	21B14M	15	20N	14E	2200
Marse Lake	21C17SP	6	16N	11E	5400
Tunnel Avenue	2188P	13	21N	11E	2450
White Pass (East Side)	21C28SP	2	13N	11E	4500

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
LOWER COLUMBIA DRAINAGE					
Asatin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Touchet River					
Touchet No. 2	17C5SP	6	7N	40E	5530
Lewis River					
June Lake	22C09SP	26	8N	5E	3200
Lane Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250
Cowlitz River					
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Patata Hill	21C14SP	36	10N	10E	4500
Sheep Canyan	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280
PUGET SOUND DRAINAGE					
Nisqually River					
Paradise Park (New)	21C35 SP	13	15N	8E	5500
White River					
Carral Pass	21B13 SP	30	18N	11E	6000
Green River					
Airstrip	21824P	18	20N	11E	1800
Charley Creek	21825	27	21N	8E	1200
Cougar Mountain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21828	12	20N	8E	2100
Lester Creek	21829	36	20N	10E	3100
Lynn Lake	21850	22	20N	8E	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Stampede Pass	21B10 SP	25	21N	11E	3860
Twin Camp	21830	18	19N	11E	4100
Cedar River					
City Cabin	2183	10	21N	10E	2390
Mt. Gardner	21B21P	30	22N	10E	3300
Snoqualmie River					
Alpine Meadow	21848	31	27N	9E	3500
Olallie Meadaws	21B2P	19	22N	11E	3625
Olallie Meadaws East	21B55SP	20	22N	11E	3700
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brown Tap	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadaws (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadows Cabins	20A8	29	36N	14E	1900
New Hazomeen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Baker River					
Dock Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Maunt Blum	21A18a	27	38N	10E	5800
Racky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadaw	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500
OLYMPIC PENINSULA					
Dungeness River					
Deer Park	2384	1	28N	5W	5200
Elwha River					
Hurricane	2383	36	29N	7W	4500
Cox Valley	23B14	31	29N	6W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow


LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Maisture Station
Sail Maisture Station
Precipitation Storage Gage
Telemetered
FORECASTED WATER SUPPLY
percent of 15 year average
Less than 80% of average
Within 20% of average
Mare than 20% abave average
Figures = Percent of average for local drainage.
PROSPECTIVE WATER SUPPLIES TO AREAS OF WASHINGTON
Based on snow surveys made on approximately first day of month
MAY 1, 1985
SCALE IN MILES
C A N A D A
O R E G O N
PACIFIC OCEAN
STRAIT OF JUAN DE FUCA
STRAIT OF GEORGIA
WHATCOM
SKAGIT
SNOHOMISH
KING
KITSAP
JEFFERSON
CLALLAM
SAN JUAN
ISLANDS
OKANOGAN
FERRY
STEVENS
PEND OREILLE
DOUGLAS
LINCOLN
SPOKANE
GRANT
ADAMS
WHITMAN
MASON
GRAYS HARBOR
PIERCE
KITTITAS
YAKIMA
BENTON
FRANKLIN
GARFIELD
ASOTIN
COLUMBIA
WALLA WALLA
THURSTON
LEWIS
PACIFIC
WAHKIAKUM
COWLITZ
CLARK
SKAMANIA
KLICKITAT
COLUMBIA RIVER RES
RES
90
91
85
80
84
86
82
91
89
105
88
95
100
103
96
93

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
UPPER COLUMBIA DRAINAGE					
Pend Oreille River					
Bayer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Kettle River					
Summit G. S.	18A7	20	39N	35E	4600
Butte Creek	18A3	28	39N	35E	4070
Goat Creek	18A4	26	39N	35E	3595
Spokane River					
Rogged Ridge	17802	12	27N	45E	3333
Calville River					
Baird	17A6	19	36N	42E	3215
Stranger Mauntain	17A5	26	31N	38E	4990
Chewelah	17A4	11	32N	41E	4925
Okanogan River					
Muttan Creek Na. 1	19A1	30	37N	24E	5700
Muttan Creek Na. 2	19A4	19	37N	24E	6000
Salmon Meadaws	19A2SP	33	37N	24E	4500
Methow River					
Harts Pass	20A5SP	7	37N	18E	6500
Chelan Lake Basin					
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Mirrar Lake	20A39	30	31N	18E	5600
Entiat River					
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Fox Camp	20A36a	17	30N	18E	6510
Pape Ridge	20B20	22	29N	18E	3540
Pape Ridge Snow Pillaw	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tommy Creek	20B21a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass Na. 2	20B2SP	35	22N	17E	4270
Stevens Pass	21B1SP	14	26N	13E	4070
Traugh #2	20B25SP	10	20N	20E	5310
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Stemilt Creek					
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20B7SP	30	21N	20E	4400
Yakima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Fish Lake	21B4SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grause Camp	20B11SP	29	21N	19E	5385
Lake Cle Elum	21B14M	15	20N	14E	2200
Marse Lake	21C17SP	6	16N	11E	5400
Tunnel Avenue	21B8P	13	21N	11E	2450
White Pass (East Side)	21C28SP	2	13N	11E	4500

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
LOWER COLUMBIA DRAINAGE					
Asatin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Touchet River					
Touchet Na. 2	17C5SP	6	7N	40E	5530
Lewis River					
June Lake	22C09SP	26	8N	5E	3200
Lone Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadaw	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250
Cawlitz River					
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Patata Hill	21C14SP	36	10N	10E	4500
Sheep Canyan	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280
PUGET SOUND DRAINAGE					
Nisqually River					
Paradise Park (New)	21C35SP	13	15N	8E	5500
White River					
Carral Pass	21813SP	30	18N	11E	6000
Green River					
Airstrip	21824P	18	20N	11E	1800
Charley Creek	21B25	27	21N	8E	1200
Cougar Mountain	21842SP	21	21N	9E	3200
Grass Mountain Na. 2	21827	14	20N	8E	2900
Grass Mountain No. 3	21828	12	20N	8E	2100
Lester Creek	21829	36	20N	10E	3100
Lynn Lake	21B50	22	20N	8E	4000
Sawmill Ridge	21831	5	19N	11E	4700
Stampede Pass	21B10SP	25	21N	11E	3860
Twin Camp	21B30	18	19N	11E	4100
Cedar River					
City Cabin	2183	10	21N	10E	2390
Mt. Gardner	21821P	30	22N	10E	3300
Snoqualmie River					
Alpine Meadow	21848	31	27N	9E	3500
Olallie Meadows	2182P	19	22N	11E	3625
Olallie Meadaws East	21855SP	20	22N	11E	3700
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brawn Top	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeaut Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadows (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
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OLYMPIC PENINSULA					
Dungeness River					
Deer Park	23B4	1	28N	5W	5200
Elwha River					
Hurricane	23B3	36	29N	7W	4500
Cox Valley	23814	31	29N	6W	4500

LEGEND

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21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow

WATER SUPPLY OUTLOOK FOR WASHINGTON

and

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

ISSUED BY

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WASHINGTON, D.C.

RELEASED BY

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STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

FORECASTS BY

SOIL CONSERVATION SERVICE
WATER SUPPLY FORECASTING STAFF, WNTC
PORTLAND, OREGON
and
NATIONAL WEATHER SERVICE
RIVER FORECAST CENTER
PORTLAND, OREGON

REPORT PREPARED BY

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360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201

WATER SUPPLY OUTLOOK

State of Washington

MAY 1, 1985

The spring snowmelt is underway throughout the state. The cold, dry trend established in early January gave way to a warm, dry April over most of Washington. Water supply forecasts for May 1 include some downward forecasts for the Columbia River and its tributaries that drain the east slopes of the Cascade Mountain Range. Precipitation for April continued to be below average. Above average temperatures for April have increased streamflows to above normal. Reservoir storage has increased to near average for the May 1 report.

SNOW COVER

May 1 snow cover has been reduced slightly from that measured April 1st. Snow cover is still showing above average for the Spokane, Blue Mountains and the Green River Watersheds. The east slopes of the Cascades snow cover continued to decline to less than 80% of average. Ahtanun Creek and the Entiat River continue below average with snow cover of 50% and 58%.

PRECIPITATION

Precipitation was below average over most of the state, with the exception of the Yakima River at 111% of normal and the northwest slopes of the Cascades at 118% of average. Northeastern Washington had 58% of average, while the North Central area had 33%. The lowest amount of precipitation fell in the North Central area with .29 inches during April. The southwest side of the Cascades was also below average with the south at 80%.

RESERVOIR STORAGE

Washington's stored water supplies are good within the irrigated sections of the state. Above normal temperatures have increased area streamflows. Irrigation reservoirs are storing 718,600 acre feet of water in the Yakima, 95% of normal. The reservoirs in the Okanogan Irrigation District are near capacity. Lake Chelan at 202.800 acre feet, is 93% of normal. Power reservoirs in the Skagit area are at 66% of average for May 1.

STREAMFLOW

Warm temperature during April started the spring runoff. Streams in the state had the following average flows for April; the Pend Oreille River at 103%, Spokane River at 128%, Yakima River at 130%, the Wenatchee River at 124%, the Walla Walla River had 134%, the cowlitz River had 143%. Temperatures have been near or above average. The following stations reported below average for April, Spokane +2, Astoria +1, and Seattle -2. The Okanogan area was 5 degrees above average.

Forecasted streamflows for streams in the Columbia River have been reduced for all areas except the Yakima River and its tributaries. Some of the streams having reduced forecasted flows include the Colville from 84% to 80%; Pend Oreille from 93% to 89%; Okanogan from 97% to 82%; the Cowlitz from 90% to 85%; the Wenatchee from 96% to 88%; and the Spokane from 111% to 105%..

STREAMFLOW FORECASTS - MAY 1985

THE FOLLOWING SUMMARIZED RUNOFF FORECASTS ARE BASED PRINCIPALLY ON MOUNTAIN SNOW COVER AND ON THE ASSUMPTION THAT PRECIPITATION AND TEMPERATURE WILL BE NEAR AVERAGE FROM THE PRESENT TIME TO THE END OF THE FORECAST PERIOD. APPRECIABLE DEVIATIONS FROM NORMAL TEMPERATURE AND/OR PRECIPITATION WILL CORRESPONDINGLY MODIFY THESE FORECASTS. THESE FORECASTS ARE MADE AS A PRODUCT OF THE COOPERATIVE EFFORTS OF THE SOIL CONSERVATION SERVICE AND THE NATIONAL WEATHER SERVICE. STREAMFLOW FIGURES FOR 1982-1984 ARE PRELIMINARY AND SUBJECT TO REVISION.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
COLUMBIA RIVER SYSTEM /1/							
COLUMBIA RIVER	37800	91	MAY-SEPT	36730	39759	46400	41733
AT BIRCHBANK	29700	90	MAY-JULY	27900	31102	36040	32833
	20800	90	MAY-JUNE	18200	20815	25280	23155
COLUMBIA RIVER	54300	90	MAY-SEPT	55800	58780	48085	60100
AT GRAND COULEE	44900	91	MAY-JULY	45250	39475	35480	49400
	33900	91	MAY-JUNE	32750	27745	24270	37300
COLUMBIA RIVER	59300	90	MAY-SEPT	59450	61910	73340	65550
BL ROCK ISLAND	49400	91	MAY-JULY	48750	50740	60580	54375
	37500	91	MAY-JUNE	35350	36625	43300	41160
COLUMBIA RIVER	81800	93	MAY-SEPT	92100	89225	105105	88290
AT THE DALLES	68400	93	MAY-JULY	77066	73820	88233	73760
	53300	93	MAY-JUNE	59000	55580	66725	57360
PEND OREILLE RIVER SYSTEM							
PEND OREILLE	14000	91	APR-SEPT	12980	12841	17721	15425
BL. BOX CANYON	12800	90	APR-JULY	11780	11482	16324	14156
	11000	90	APR-JUNE	9895	9226	13306	12227
KETTLE RIVER SYSTEM							
KETTLE RIVER	1300	82	MAY-SEPT	2027	2194	2131	1581
NR LAURIER	1220	82	MAY-JULY	1915	2019	1975	1491
	1090	82	MAY-JUNE	1592	1736	1548	1334
COLVILLE RIVER	107	80	APR-SEPT	243	182	160	134
AT KETTLE FALLS	98	80	APR-JULY	221	161	161	123
	91	80	APR-JUNE	197	144	132	114

/1/ OBSERVED FLOW CORRECTED FOR STORAGE IN ANY OF THE FOLLOWING RESERVOIRS WHICH ARE ABOVE THE STATION: KOOTENAY LAKE, HUNGRY HORSE, FLATHEAD LAKE, PEND OREILLE LAKE, F.D. ROOSEVELT LAKE, LAKE CHELAN, COEUR D'ALENE LAKE, BROWNLEE, NOXON RESERVOIR AND PUMPAGE AT F. D. ROOSEVELT LAKE.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
SPOKANE RIVER SYSTEM							
SPOKANE RIVER	2090	105	MAY-SEPT	1942	1621	1236	1988
AT POST FALLS/2/	1960	105	MAY-JULY	1828	1445	1069	1884
OKANOGAN RIVER SYSTEM							
SIMILKAMEEN R.	1220	86	MAY-SEPT	1131	1366	1592	1376
NR NIGHTHAWK	1138	86	MAY-JULY	1033	1232	1445	1279
	955	86	MAY-JUNE	811	1031	1120	1075
OKANOGAN RIVER	1244	82	MAY-SEPT	1531	1903	1921	1517
NR TONASKET	1150	82	MAY-JULY	1335	1624	1587	1370
	950	82	MAY-JUNE	1022	1302	1181	1135
METHOW RIVER SYSTEM							
METHOW RIVER	755	84	MAY-SEPT	891	1187	1133	900
NR PATEROS	695	84	MAY-JULY	801	1076	1050	828
	580	84	MAY-JUNE	637	927	848	693
CHELAN RIVER SYSTEM							
CHELAN RIVER	900	82	MAY-SEPT	994	1120	1301	1094
AT CHELAN /3/	776	82	MAY-JULY	861	963	1148	946
	588	82	MAY-JUNE	603	760	883	717
STEHEKIN RIVER	690	80	APR-SEPT	736		938	860
AT STEHEKIN	580	80	APR-JULY	608	727	800	727
	440	80	APR-JUNE	411	572	603	553
ENTIAT RIVER	190	81	APR-SEPT	231	292	282	235
NR ARDENVOIR	170	80	APR-JULY	207	263	258	213
	138	80	APR-JUN	152	221	206	172
WENATCHEE RIVER SYSTEM							
WENATCHEE RIVER	1000	88	APR-SEPT		GAGE ABANDONED		1136
NR PLAIN	880	88	APR-JULY				1001
	673	88	APR-JUNE				899
WENATCHEE RIVER	1370	90	MAY-SEPT	1107	1375	1860	1523
AT PESHASTIN	1220	90	MAY-JULY	951	1217	1638	1356
	943	90	MAY-JUNE	588	976	1276	1048
STEMILT BASIN	*121	88	MAY-SEPT		GAGE ABANDONED		**138
NR WENATCHEE							
ICICLE CREEK	322	87	APR-SEPT		GAGE ABANDONED		**370
NR LEAVENWORTH	296	87	APR-JULY				**340
	235	87	APR-JUNE				**270

* THOUSANDS OF MINERS' INCHES.

** AVERAGE COMPUTED FOR 1963-1977.

/2/ FORECASTS MADE BY JERRY BEARD, SOIL CONSERVATION SERVICE, BOISE, IDAHO. OBSERVED FLOW CORRECTED FOR STORAGE IN COEUR D'ALENE LAKE.

/3/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE CHELAN.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
YAKIMA RIVER SYSTEM							
YAKIMA RIVER	108	95	MAY-SEPT	113	89	135	114
NR MARTIN /4/	98	95	MAY-JULY	104	76	120	103
	82	95	MAY-JUNE	87	61	104	86
YAKIMA RIVER	733	94	MAY-SEPT	798	752	985	780
AT CLE ELUM /5/	651	94	MAY-JULY	707	596	895	693
	540	94	MAY-JUNE	560	488	768	574
YAKIMA RIVER	1625	95	MAY-SEPT	1652	1737	2070	1711
NR PARKER /6/	1435	95	MAY-JULY	1432	1489	1846	1510
	1210	95	MAY-JUNE	1152	1249	1569	1274
KACHESS RIVER	93	95	MAY-SEPT	102	81	116	98
NR EASTON /7/	87	95	MAY-JULY	91	71	108	92
	74	95	MAY-JUNE	74	60	92	78
CLE ELUM RIVER	380	95	MAY-SEPT	395	372	470	400
NR ROSLYN /8/	342	95	MAY-JULY	350	324	422	360
	276	95	MAY-JUNE	263	263	346	291
BUMPING RIVER	126	100	MAY-SEPT	122	126	147	126
NR NILE /9/	114	100	MAY-JULY	112	115	134	114
	91	100	MAY-JUNE	87	94	109	91
AMERICAN RIVER	125	101	APR-SEPT	114	157	140	124
NR NILE	114	101	APR-JULY	104	144	130	113
	95	101	APR-JUNE	81	120	109	94
TIETON RIVER/10/	220	103	MAY-SEPT	219	250	250	214
AT TIETON DAM	180	103	MAY-JULY	172	203	211	175
	137	103	MAY-JUNE	124	157	164	133
NACHES RIVER	750	103	MAY-SEPT	656	762	982	728
NR NACHES /11/	664	103	MAY-JULY	594	689	902	645
	546	103	MAY-JUNE	470	584	717	530
AHTANUM CREEK	45	96	APR-SEPT	34	67	62	47
NR TAMPICO /12/	37	95	MAY-SEPT				39
	41	95	APR-JULY	29	61	58	43
	36	97	APR-JUNE	24	54	51	37

/4/ OBSERVED FLOW CORRETED FOR STORAGE IN LAKE KEECHELUS.
/5/ OBSERVED FLOW CORRECTED FOR STORAGE IN KEECHELUS, KACHESS, AND CLE ELUM LAKES AND DIVERSION BY KITTITAS CANAL.
/6/ OBSERVED FLOW CORRECTED FOR STORAGE IN KEECHELUS, KACHESS, CLE ELUM, BUMPING, AND RIMROCK LAKES AND DIVERSIONS BY ROSA, UNION GAP, NEW RESERVATION, OLD RESERVATION AND SUNNYSIDE CANALS.
/7/ OBSERVED FLOW CORECTED FOR STORAGE IN LAKE KACHESS.
/8/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE CLE ELUM.
/9/ OBSERVED FLOW CORRECTED FOR STORAGE IN BUMPING LAKE.
/10/ OBSERVED FLOW CORRECTED FOR STORAGE IN RIMROCK LAKE.
/11/ OBSERVED FLOW CORRECTED FOR STORAGE IN BUMPING AND RIMROCK LAKES AND DIVERSIONS BY TIETON, SELAH VALLEY, WAPATOX CANALS AND CITY OF YAKIMA.
/12/ OBSERVED FLOW OF NORTH AND SOUTH FORKS (COMBINED).

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET

BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE-CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
LOWER COLUMBIA RIVER SYSTEM							
MILL CREEK	16.6	95	APR-SEPT	23.46	13.48	24.62	**17.50
AT WALLA WALLA	16.5	95	APR-JULY	23.08	13.39	24.48	**17.33
	16.3	95	APR-JUNE	22.24	13.36	21.63	**17.15
LEWIS RIVER	720	80	MAY-SEPT	959	928	816	900
AT ARIEL /13/	590	80	MAY-JULY	816	719	676	737
	490	80	MAY-JUNE	687	494	573	612
COWLITZ RIVER	1375	85	MAY-SEPT	1696	1559	4545	1617
BL MAYFIELD DAM	1150	85	MAY-JULY	1479	1378	1572	1357
/14/	920	85	MAY-JUNE	1189	1048	1331	1081
COWLITZ RIVER	1750	85	MAY-SEPT	3117	1998	1918	2058
AT CASTLE ROCK	1450	85	MAY-JULY	2714	1575	1626	1708
/14/	1160	85	MAY-JUNE	2204	1119	1343	1365
OLYMPIC PENINSULA							
DUNGENESS RIVER SYSTEM							
DUNGENESS RIVER	146	91	APR-SEPT		197	196	160
NR SEQUIM	118	91	APR-JULY		158	163	130
	88	91	APR-JUNE		117	117	97
ELWHA RIVER SYSTEM							
ELWHA RIVER	500	90	APR-SEPT	469	538	607	**553
NR PORT ANGELES	410	90	APR-JULY	383	448	512	**454
PUGET SOUND							
SKAGIT RIVER SYSTEM							
AT NEWHALEM /15/	2000	85	APR-SEPT	1378	1531	1880	**2356
	1675	85	APR-JULY	997	1061	1439	**1972
	1260	85	APR-JUNE	621	698	1004	**1485
GREEN RIVER SYSTEM							
GREEN RIVER BL	270	85	APR-SEPT	275	190	227	**316
HOWARD HANSEN DAM	240	85	APR-JULY	243	145	195	**284
/16/	215	84	APR-JUNE	217	107	174	**256
CEDAR RIVER SYSTEM							
CEDAR RIVER NR CEDAR FALLS	79	85	APR-SEPT	86	66	80	**93

/13/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE MERWIN, YALE AND SWIFT RESERVOIRS.

/14/ OBSERVED FLOW CORRECTED FOR STORAGE IN RIFFE LAKE AND MAYFIELD RESERVOIR.

/15/ OBSERVED FLOW CORRECTED FOR STORAGE IN DIABLO, ROSS AND GORGE RESERVOIRS.

/16/ OBSERVED FLOW CORRECTED FOR STORAGE IN HOWARD HANSON DAM.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of washington stream basins presents the water content of the snow about MAY 1, 1985, as percent of the same date in 1984 and average of record.

Tributary Basin	No. of Courses	1985 Snow Water Expressed as percent of 1984	Average 1961-80
		UPPER COLUMBIA BASIN	
Pend Oreille	9	108	91
Kettle	2	89	88
Colville	0		
Spokane	4	152	104
Okanogan	20	99	88
Methow	1		
Chelan			
Entiat	3	91	58
Wenatchee	7	123	73
Yakima	9	118	77
Ahtanum	1		
		LOWER COLUMBIA BASIN	
Mill Creek	1		112
Cowlitz	1	81	72
		PUGET SOUND	
White	0		
Green	8	157	175
Snoqualmie	1	144	86
Skykomish	2	112	81
Skagit	11	147	86
Baker	9	138	107
		OLYMPIC PENNINSULA	
Morse	1	107	88
Elwha	1	104	67
Dungeness	1	136	72

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured (MAY 1) 1985	1984	1983	Normal*
		COLUMBIA				
Spokane	Coeur d'Alene Lake	225.1	214.6	230.8	182.3	238.4
Columbia	Franklin D. Roosevelt Lake	5232.0	947.3	2222.3	523.4	867.8
Columbia	Banks Lake	714.9	645.4	405.6	650.7	442.8
Okanogan	Conconully Reservoir	13.0	13.0	13.0	13.0	7.7
Okanogan	Conconully Lake	10.5	9.8	10.4	10.4	8.0
Chelan	Lake Chelan	676.1	202.8	261.7	281.0	219.0
		YAKIMA				
Yakima	Keechelus Lake	157.8	126.9	147.0	139.6	113.8
Kachess	Kachess Lake	239.0	200.7	230.0	227.0	194.2
Cle Elum	Lake Cle Elum	436.9	258.5	403.0	393.2	295.9
Bumping	Bumping Lake	33.7	17.2	21.2	8.8	11.6
Tieton	Rimrock Lake	198.0	115.3	184.8	148.3	136.6
		PUGET SOUND				
Skagit	Ross Reservoir	1404.1	468.2	887.3	712.9	754.4
Skagit	Diablo Reservoir	90.6	84.6	83.8	88.0	85.7
Skagit	Gorge Reservoir	9.8	8.0	7.5	8.4	8.0

1/ Based on Active Storage
* 15-yr. Average 1963-1977

PRECIPITATION 1/

Division Average Observations and Departures

Drainage Divisions	Fall Sept-Oct Observed	Fall 1984 2/ Departure	Winter Nov. 1984 - Mar. 1985 2/ Observed	Winter Departure	Spring /Apr- Observed	Spring 1985 Departure
Northeastern Wash	1.83	-0.65	9.02	-0.23	0.47	-0.77
Southeastern Wash	2.22	-0.29	10.00	-0.20	0.82	-0.64
East Slope Cascades	3.24	-1.51	20.04	-7.31	2.05	+0.20
North Central Wash	1.54	-0.05	4.78	-1.58	0.29	-0.57
Northwest Cascades	11.98	-1.23	40.18	-15.1	6.89	+1.07
Southwest Cascades	8.89	-4.59	28.96	-11.51	3.29	-0.82

Northeastern Washington	- Lower Spokane, Colville, Sandpoil, and - Lower Kettle Drainages
Southeastern Washington	- Touchet, Tucannon, and Palouse Drainages
East Slope Cascades	- Yakima, Wenatachee, and Chelan Drainages
North Central Washington	- Methow and Okanogan Drainages
Northwest Slope Cascades	- Puget Sound Drainages
Southwest Slope Cascades	- Lower Columbia Drainages

1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service.
2/ - Departure from 15-year (1958-1972) drainage division average.

WSFB-X+L

SNOW DATA TO MAY 1, 1985 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
UPPER COLUMBIA DRAINAGE							
PEND OREILLE RIVER							
Benton Meadow	16A02	2344	5/01	0	0.0	0.0	4.9
Benton Spring	16A03	4900	5/01	30	13.9	12.8	15.6
Boyer Mtn	17A02	5250	4/29	54	23.0	26.5	24.9
Bunchgrass Meadow	17A01	5000	4/30	53	25.4	28.2	29.0
Chewelah	17A04	4925	NO REPORT				
Hoodoo Basin	15C10	6000	4/29	112	52.9	42.8	54.5
Hoodoo Creek	15C01	5900	4/29	99	44.4	39.4	50.7
Lookout	15B02	5250	4/30	68	34.6	23.8	33.7
Nelson	2D04CA	3050	NO REPORT			2.2	7.0
Schweitzer Bowl	16A06	4500	4/29	46	22.3	20.3	23.7
Schweitzer Ridge	16A05	6100	4/29	89	41.4	43.6	47.8
KETTLE RIVER							
Barnes Creek	2B06CA	5300	4/29	46	18.5	20.9	20.7
Big White Mtn.	2E03CA	5500	NO REPORT			21.8	21.1
Butte Creek	18A03	4070	"				
Carmi	2E02CA	4100	"				2.0
Farron #1	2B02CA	4000	"				9.4
Farron #2	2B02ACA	4000	"				9.2
Goat Creek	18A04	3595	"				0.0
Monashee Pass	2E01CA	4500	4/29	32	11.1	12.5	12.8
Summit G.S.	18A05	2150	NO REPORT				5.8
Trapping Creek Lower	2E05CA	3050	"			0.0	0.0
Trapping Creek Upper	2E04CA	4450	"			4.3	6.0
COLVILLE RIVER							
Baird	17A06	3215	NO REPORT				
Chewelah	17A04	4925	"				
Togo	18A10	3370	"				
OMAK LAKE, TWIN LAKES							
Mission	19A11	1150	NO REPORT				
Mount Tolman	18A12	2000	"				
Twin Lake	18A11	2700	"				

Average based on 1961-1980 averages
sp SNOTEL data

WSFB-x-L

SNOW DATA TO MAY 1, 1985 - APPENDIX 2

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
SPOKANE RIVER							
Above Burke	15B08	4100	4/30	40	18.2	9.8	19.9
4th of July Summit	16B03	3100	NO REPORT		0.0	0.0	0.0
Lookout	15B02	5250	4/30	68	34.6	23.8	33.7
Lost lake	15B14A	6000	4/29	128	61.4	46.2	59.1
Mosquito Ridge	16A04	5110	NO REPORT				
Sherwin	16C01	3200	4/29		9.1E	1.4	5.5
Sunset	15B09A	5600	5/01		33.7SP		
NEWMAN LAKE							
Ragged Ridge	17B02	3333	4/15	0	0.0	0	New
OKANOGAN RIVER							
Aberdeen Lake	1F01CA	4300	NO REPORT			0.3	1.7
Blackwall Peak	2G03CA	6250	4/29	76	31.0	25.0	37.8
Brenda Mine	2F18CA	4800	4/29	33	11.5		9.9
Brookmere	1C01CA	3200	NO REPORT			0.0	5.6
Enderby	1F04CA	6250	4/30	96	39.4	45.7	42.3
Esperon Creek Lower	2F15CA	4400	NO REPORT				9.3
Esperon Creek Middle	2F15CA	4700	"				12.3
Esperon Creek Upper	2F13CA	5400	"				18.1
Grayback Reservoir	2F08CA	5225	4/30	21	6.4	9.8	8.0
Hamilton Hill	2G06CA	4900	4/29	29	11.0	6.3	13.2
Harts Pass	20A05A	6500	4/29	88	35.7	37.0	48.9
Isintok Lake	2F11CA	6300	4/28	13	4.3	5.1	7.1
Lost Horse Mountain	2G04CA	7000	NO REPORT				10.5
McCulloch	2F03CA	4200	4/29	0	0.0	.4	2.7
Missezula Mtn.	2G05CA	5100	4/28	22	8.3	4.3	6.0
Mission Creek	2F05CA	6000	NO REPORT				21.7
Monashee Pass	2E01CA	4500	4/29	32	11.1	12.5	12.8
Mount Kobau	2F12CA	5960	4/27	37	12.9	16.9	12.8

Average based on 1961-1980 averages
s SNOTEL data

SNOW DATA TO MAY 1, 1985 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
OKANOGAN RIVER (CONT.)							
Mutton Creek No. 1	19A01	5700	4/30	0	0.0		11.8
Mutton Creek No.2 SP	19A11	6000	NO REPORT				New
Nickel Plate	2G02CAN	6200	"			8.0	8.1
Oyama Lake	2F19CAN	4400	4/28	9	2.9	3.1	3.1
Postill Lake	2F07CAN	4500	4/30	15	4.7	6.8	6.6
Rusty Creek	19A03	4000	4/30	0	0.0	0.0	0.7
Salmon Meadows	19A02	4500	4/30	0	0.0		5.0
Silver Star Mountain	2F10CAN	6050	4/28	67	28.1	30.7	28.3
Summerland Reservoir	2F02CAN	4200	4/28	17	5.5	5.9	5.8
Sunday Summit	2G01CAN	4300	4/30	0	0.0	.0	1.1
Trout Creek	2F01CAN	4700	4/28	14	4.3	1.6	5.2
Vaseux Creek	2F20CAN	4600	4/29	7	2.4	6.4	2.5
White Rocks Mountain	2F09CAN	6000	4/29	51	20.8	23.4	24.8
METHOW RIVER							
Harts Pass	20A05A	6500	4/29	88	35.7	37.0	48.9
Mutton Creek No. 1	19A01	5700	4/30	0	0.0		10.1
Mutton Creek No. 2 SP	19A11	6000	Not Measured				12.4
Rusty Creek	19A03	4000	4/30	0	0.0	0.0	.7
Salmon Meadows	19A02	4500	4/30	0	0.0		5.0
CHELAN LAKE BASIN							
Cloudy Pass +	20A22	6500	NO REPORT				35.2
Little Meadows +	20A24a	5275	"				37.6
Lyman Lake	20A23	5900	5/01		51.9SP		82.0
Mirror Lake	30A39	5600	5/01		25.9SP		
Park Creek Ridge	20A12	4600	5/01		33.3SP		31.7
Rainy Pass	20A09	4780	4/30	76	32.4	33.0	43.1

Average based on 1961-1980 averages
+ Aerial stadia observation
sp SNOTEL data

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SNOW DATA TO MAY 1, 1985 - APPENDIX 4

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
ENTIAT RIVER							
Brief	20B19	1600	4/29	0	0	0	.0
Entiat Meadows +	20A33	4540	NO REPORT			27.1	35.7
Entiat River Trail +	20A34	3325	"			5.0	9.1
Fox Camp +	20A36	6510	"			60.7	62.9
Pope Ridge	20B20	3450	4/29	11	4.6		9.4
Pugh Ridge +	20A32	6725	NO REPORT			30.8	37.9
Shady Pass	20A37	6200	4/29	40	18.7	25.6	30.3
Snow Brushy +	20A35	3910	NO REPORT			27.7	28.0
Tommy Creek +	20B21	4900	"			14.5	20.2
WENATCHEE RIVER							
Berne Mill Creek	21B23	3170	4/29	51	21.8	7.0	21.8
Berne Mill Creek SP	21B41	3240	4/29	27	11.8	7.0	17.7
Blewett Pass No. 2	20B02	4270	5/01	0	0.0	7.3	9.6
Chiwaukum G. S.	20B16	1810	4/29	0	0.0	0	1.5
Lake Wenatchee	20B05	1970	Watershed Logged		Discontinued		
Lyman Lake	20A23	5900	5/01		51.9SP		82.0
Merritt	20B18	2140	4/29	0	0.0	0.0	5.5
Stevens Pass	21B01	4070	4/29	98	45.8	41.5	54.3
Stevens Pass Sand Shed	21B45	3700	4/29	57	26.5	22.7	34.5
COLOCKUM CREEK							
Trough #2(SP)	20B25	5310	5/01		0.0sp	2.3	6.9

+ Aerial stadia observation
# Average based on 1961-1980 averages
sp SNOTEL data

SNOW DATA TO MAY 1 , 1985 - APPENDIX 5

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (inches)	Water Content (inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
SQUILCHUCK CREEK							
Beehive Springs	20B03	4400	NO REPORT			0.0	1.8
Scout-a-Vista	20B04	3400	"				
STEMILT CREEK							
Stimelt Slide	20B06	5000	NO REPORT			2.7	6.8
Upper Wheeler	20B07	4400	"			8.4	1.0
YAKIMA RIVER							
Ahtanum R.S.	21C11	3100	4/25	0	0.0	0.0	0.0
Big Boulder Creek	21B09	3200	4/30	16	7.5	8.5	9.1
Blewet Pass No. 2	20B02	4270	5/01	0	0.0	6.3	9.6
Bumping Lake Old	21C08	3450	4/26	20	7.6	3.2	9.0
Bumping Lake New	21C36	3400	4/26	31	12.0	8.4	13.6
Cayuse Pass	21C06	5300	NO REPORT			83.0	90.6
Colockum Pass	20B09	5370	"				14.2
Corral Pass	21B13	6000	"				37.7
Fish Lake	21B04	3371	4/30	41	19.0	19.8	26.4
Green Lake	21C10	6000	NO REPORT				
Grouse Camp	20B11	5385	"				17.1
Lake Cle Elum	21B14	2200	"				
Morse Lake	21C17	5400	"				60.9
Olallie Meadows	21B02	3625	4/30	90	43.5	30.2	50.1
Stampede Pass	21B10	3860	NO REPORT			48.0	41.2
Tunnel Avenue	21B08	2450	4/29	31	14.0	3.7	15.4
White Pass E. Side	21C28	4500	4/25	57	19.0	23.4	26.1

Average based on 1961-1980 averages
sp SNOTEL Reading

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SNOW DATA TO MAY 1, 1985 - APPENDIX 6

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (inches)	Water Content (inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
AHTANUM CREEK							
Ahtanum R. S.	21C11	3100	4/25	0	0.0	3.2	5.8
Green Lake	21C10	6000	5/01		12.3sp	34.8	
LOWER COLUMBIA DRAINAGE							
MILL CREEK							
High Ridge SP	18D19	4890	4/30	38	19.5	0.0	
Touchet # 2 SP	17C55	5530	4/26	76	33.0		
COWLITZ RIVER							
Cayuse Pass	21C06	5300	NO REPORT			83.0	90.6
White Pass E. Side	21C28	4500	4/25	57	19.0	23.4	26.1
PUGET SOUND DRAINAGE							
WHITE RIVER							
Cayuse Pass	21C06	5300	NO REPORT			83.0	90.6
Corral Pass	21B13	6000	"				37.7
Morse Lake	21C17	5400	"				60.9
GREEN RIVER							
Airstrip	21B24	1800	5/02	0	0.0		
Charley Creek	21B25	1200	5/02	0	0.0	0.0	0.0
Cougar Mountain	21B42	3200	5/01		20.4sp		16.4
Grass Mtn. No. 2	21B27	2900	5/02	24	9.4	1.1	2.1
Grass Mtn. No. 3	21B28	2100	5/02	0	0	0.0	0.0
Lester Creek	21B29	3100	5/02	62	27.3	14.0	14.5
Lynn Lake	21B50	4000	5/02	58	29.9		3.2
Sawmill Ridge	21B31	4700	5/02	82	36.3	29.2	39.5
Stampede Pass	21B10	3860	5/01		50.0sp		41.2
Twin Camp	21C30	4100	5/02	49	24.7	17.8	13.5

Average based on 1961-1980 averages
sp SNOTEL Reading

WSFB-X4-L

SNOW DATA TO MAY 1, 1985 - APPENDIX 7

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Last Year	Average #
SNOQUALMIE RIVER							
Olallie Meadows	21B02	3960	4/30	90	43.5	30.2	50.1
SKYKOMISH RIVER							
Stevens Pass	21B01	4070	4/29	98	45.8	41.5	54.3
Stevens Pass Sand Shed	21B45	3700	4/29	57	26.5	22.7	34.5
SKAGIT RIVER							
Beaver Creek Trail	21A04	2200	4/30	5	2.5	0.0	5.5
Beaver Pass	21A01	3680	4/29	63	24.0	13.0	31.3
Brown Top Ridge	21A28	6000	4/29	126	53.8	53.2	67.5
Devils Park	20A04	5900	4/29	92	39.2	29.6	48.2
Freezeout Creek Trail	20A01	3500	4/29	22	7.0	1.1	8.4
Freezeout Meadow	20A38	5040	4/29	60	25.0	19.4	35.8
Granite Creek	21A29	3500	4/30	30	11.4	5.4	18.2
Harts Pass	20A05A	6500	4/29	88	35.7	37.0	48.9
Klesilkwa	3D03ACA	3710	4/29	17	7.0	0.0	7.2
Lightning Lake	3D02CAN	4000	4/29	29	9.8	5.9	11.5
Lyman Lake	20A23	5900	NO REPORT				82.0
Meadows Cabin	20A08	1900	4/30	0	0.0	0.0	1.5
New Hozomeen Lake	21A30	2800	4/29	14	4.0	0.0	7.8
Rainy Pass	20A09	4780	4/30	76	32.4	33.0	43.1
Thunder Basin	20A07	4200	4/30	55	19.8	10.2	24.3

Average based on 1961-1980 averages
sp SNOTEL data

WSFB-22-L

SNOW DATA TO MAY 1, 1985 - APPENDIX 8

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Last Year	Average #
BAKER RIVER							
Dock Butte +	20A11A	3800	4/30	150	81.0	58.0	74.1
Easy Pass +	21A07A	5200	4/30	207	97.0	74.0	91.2
Jasper Pass +	21A06A	5400	4/30	184	93.0	76.0	95.3
Martin Lake	21A09A	3600	4/30	168	91.0	68.0	81.0
Mt. Blum +	21A18A	5800	4/30	158	79.0	69.0	70.9
Rocky Creek	21A12A	2100	4/30	58	33.0	5.0	22.3
Schreibers Meadow	21A10A	3400	4/30	108	60.0	40.0	63.9
S.F. Thunder Creek +	21A14A	2200	4/30	0	0.0	0.0	1.5
Watson Lakes	21A08A	4500	4/30	158	79.0	55.0	73.2
OLYMPIC PENINSULA DRAINAGE							
DUNGENESS RIVER							
Deer Park	23B04	5200	4/30	38	16.3	12.0	22.5
MORSE CREEK							
Cox Valley	23B14	4500	4/28	87	36.8	34.4	42.0
ELWHA RIVER							
Hurricane	23B03	4500	4/28	49	17.1	16.5	25.6
WYNOOCHEE RIVER							
Carrol Pass	23B15	3650	5/02	78	35.6		

\+ Aerial stadia observation
\# Average based on 1961-1980 average

WSFB-X+-L

SNOTEL READINGS, MAY 1, 1985 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (inches)	Last Year	Average
PEND OREILLE RIVER							
Bunchgrass Meadows	17A01	5000	04/15		24.0	30.7	
	GT		05/01	58	26.5		
			05/01		23.2	28.4	29.3
OKANOGAN & METHOW RIVERS							
Harts Pass	20A05	6500	04/15		44.0	38.2	
	GT						
			05/01		45.7	39.9	41.8
Salmon Meadows	19A02	4500	04/15		3.7	19.9	
			05/01		0.0	14.6	14.1
CHELAN LAKE BASIN							
Lyman Lake	20A23	5900	04/15		48.8	58.9	
	GT						
			05/01		51.9	68.9	68.7
Mirror Lake	20A39	5600	04/15		24.1	30.2	
	GT						
	05/01		25.9	32.2	31.8		
Park Creek Ridge	20A12	4600	04/15		33.9	35.6	
	GT						
			05/01		33.3	32.2	31.8
Rainy Pass	20A09	4780	04/15		36.2	34.4	
	GT						
			05/01		37.5	34.3	32.9
ENTIAT RIVER							
Pope Ridge	20B20	3450	04/15		9.3	13.0	
	GT		04/29	10	4.8		
			05/01		4.2	6.9	6.7
WENATCHEE RIVER							
Blewett Pass	20B02	4270	04/15		12.2	18.8	
	GT		05/01	10	4.6		
			05/01		6.8	12.8	10.2
Lyman Lake	20A23	5900	04/15		48.8	68.9	
	GT						
				05/01		51.9	68.8
68.7							
Stevens Pass	21B01	4070	04/15		39.5	39.7	
	GT						
			05/01		38.5	37.1	24.2
Trough # 2	20B25	5300	04/15		1.0	2.7	
	GT						
			05/01		0.0	0.4	8.8

GT = Ground Truth measurement at SNOTEL site

WSFB-21-L

SNOTEL READINGS, MAY 1, 1985 - APPENDIX 2

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Numoer	Elevation	THIS YEAR Date of Survey	Snow Depth (Inches)	Water Content (Inches)	PAST RECORD Water Content (Inches) Last Year	Average
COLOCKUM CREEK							
Trough # 2	20B25 GT	5300	04/15		1.0	2.7	
			05/01		0.0	0.4	8.8
STEMILT CREEK							
Upper Wheeler	20B07 GT	4400	04/15		7.5	14.6	
			05/01		2.5	9.3	14.6
YAKIMA RIVER							
Big Boulder Creek	21B09	3200	DISCONTINUED				
Bumping Ridge	21C38 GT	4600	04/15		28.3	31.2	
			05/01		28.0	30.6	16.7
Corral Pass	21B13 GT	6000	04/15				
			05/01				23.0
Fish Lake	21B04 GT	3371	04/15		29.6	32.2	
			05/01		30.2	29.2	19.8
Green Lake	21C10 GT	6000	04/15		13.5	14.7	
			05/01		12.3	20.8	28.5
Grouse Camp	20B11 GT	5385	04/15		8.8.	19.8	
			05/01		4.0	16.2	20.4
Morse Lake	21C17	5400	04/15		44.6	61.8	
			05/01		44.9	65.2	70.7
Sasse Ridge	21C40	4400	04/15				
	GT		04/30	66	29.0		
			05/01		26.1		
White Pass E. Side	21C28 GT	4500	04/15		22.0	26.6	
			05/01		22.5	26.8	25.5

GT = Ground Truth measurement at SNOTEL site

WSFB-X-L

SNOTEL READINGS, MAY 1, 1985 - APPENDIX 3

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Water Content (inches) Last Year	Water Content (inches) Average
AHTANUM CREEK							
Green Lake	21C10 GT	6000	04/15		13.5	14.7	
			05/01		12.3	20.9	28.5
TOUCHET RIVER							
Touchet # 2	17C5 GT	5530	04/15		36.4	31.7	
			04/26	76	33.0		
			05/01		34.2	30.1	29.4
LEWIS RIVER							
June Lake	22C09 GT	3200	04/15		39.1		
			05/01		36.8		
Lone Pine Shelter	21C26 GT	3800	04/15		39.6	40.0	
			05/01		28.3	39.8	40.3
Plains of Abraham	22C01	4400	04/15		86.6	94.7	
			05/01		91.6	99.6	53.5
Sheep Canyon	22C10	4050	04/15		44.5	49.8	
			04/30		49.1	42.4	58.2
Spencer Meadow	21C20	3400	04/15			25.1	
			05/01				22.6
Surprise Lake	21C13 GT	4250	04/15			59.6	
			05/01		50.2	58.0	58.2
COWLITZ RIVER							
Pigtail Peak	21C33 GT	5900	04/15		46.5	49.7	
			05/01		49.9	51.0	46.1
Potato Hill	21C14 GT	4500	04/15		27.5	22.4	
			05/01		25.5	20.5	20.5
Sheep Canyon	22C10	4050	04/15		44.5	49.8	
			04/30		49.1	42.4	58.2
Strawberry Landing	22C08 GT	3280	04/15		61.2		
			05/01		53.8		38.3
Steppes PC	22C11		04/15			69.7	
Spirit PC	22C12		04/15		0.0	.6	
			05/01		0.0	0.0	

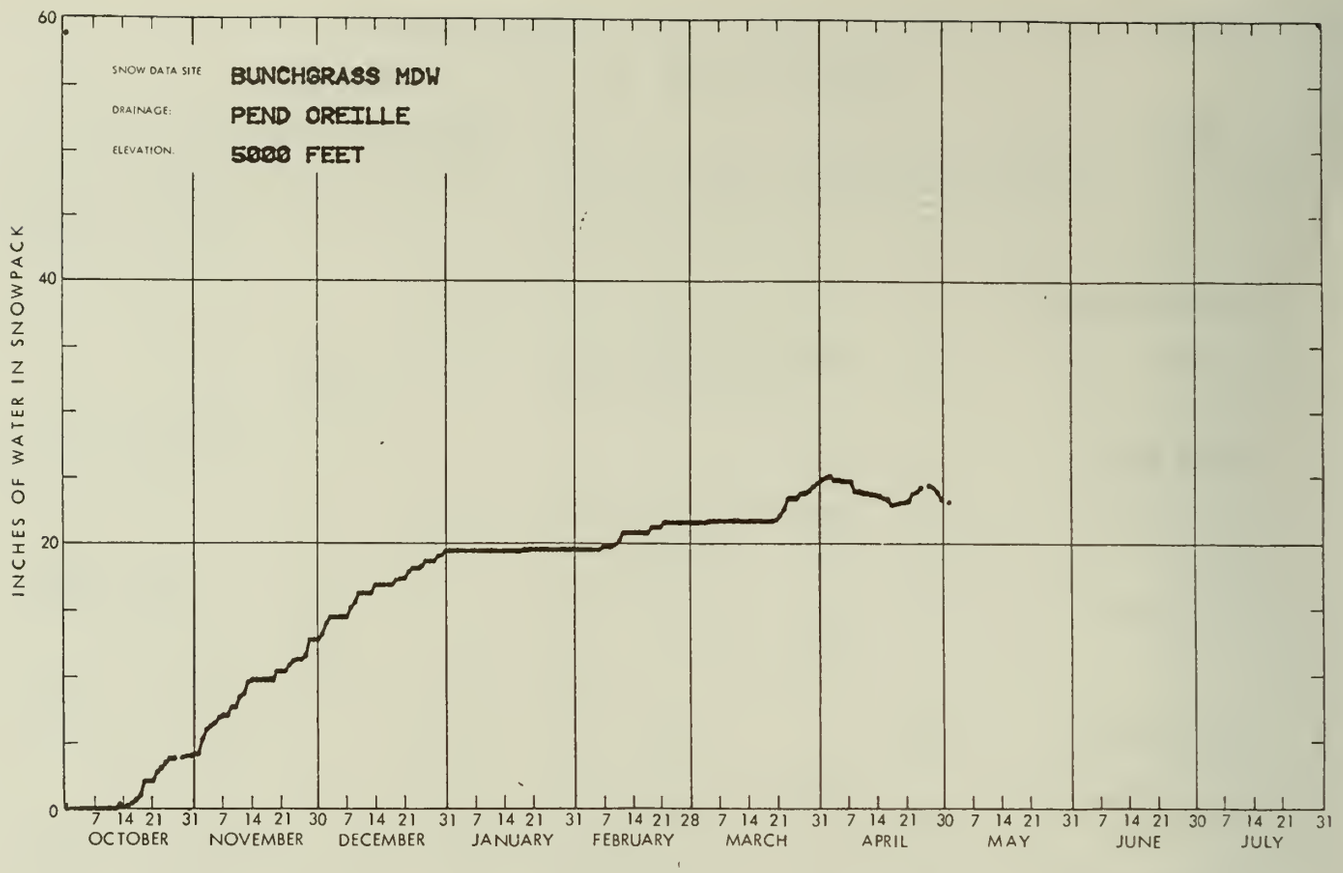
GT = Ground Truth measurement at SNOTEL sites

WSFB-11-L

SNOTEL READINGS, MAY 1, 1985 - APPENDIX 4

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average
NISQUALLY RIVER							
Paradise Park	21C35	5500	04/15		69.9	18.0	
			05/01		74.7		28.5
WHITE RIVER							
Corral Pass	21B13 GT	6000	04/15				
			05/05				23.2
Morse Lake	21C17 GT	5400	04/15		44.6	61.8	
			05/01		44.9	63.2	70.7
GREEN RIVER							
Cougar Mountain	21B42 GT	3200	04/15		22.2	19.1	
			05/01		20.4	16.1	13.3
Stampede Pass	21B10 GT	3960	04/15		46.9	48.0	
			05/01		50.0	46.8	32.1
SNOQUALMIE RIVER							
Olallie Meadows East	21B55	3960	04/15		66.1	57.4	
			05/01		69.2	56.3	51.4

GT = Ground Truth measurements at SNOTEL sites


SNOW DATA SITE
BUNCHGRASS MDW
DRAINAGE:
PEND OREILLE
ELEVATION.
5000 FEET
INCHES OF WATER IN SNOWPACK
60
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7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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MARCH
APRIL
MAY
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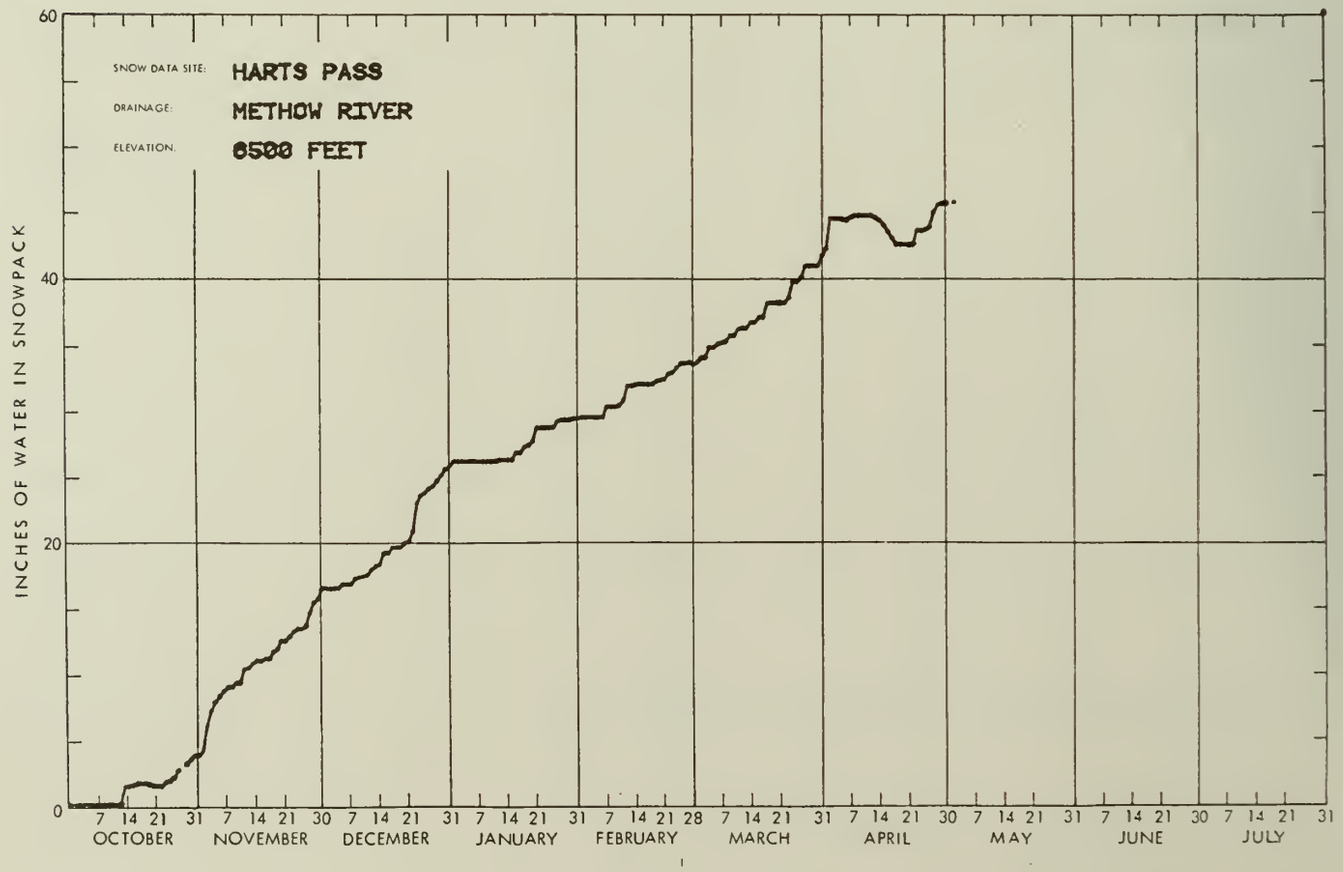
JULY


SNOW DATA SITE:
HARTS PASS
DRAINAGE:
METHOW RIVER
ELEVATION.
6500 FEET
INCHES OF WATER IN SNOWPACK
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40
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7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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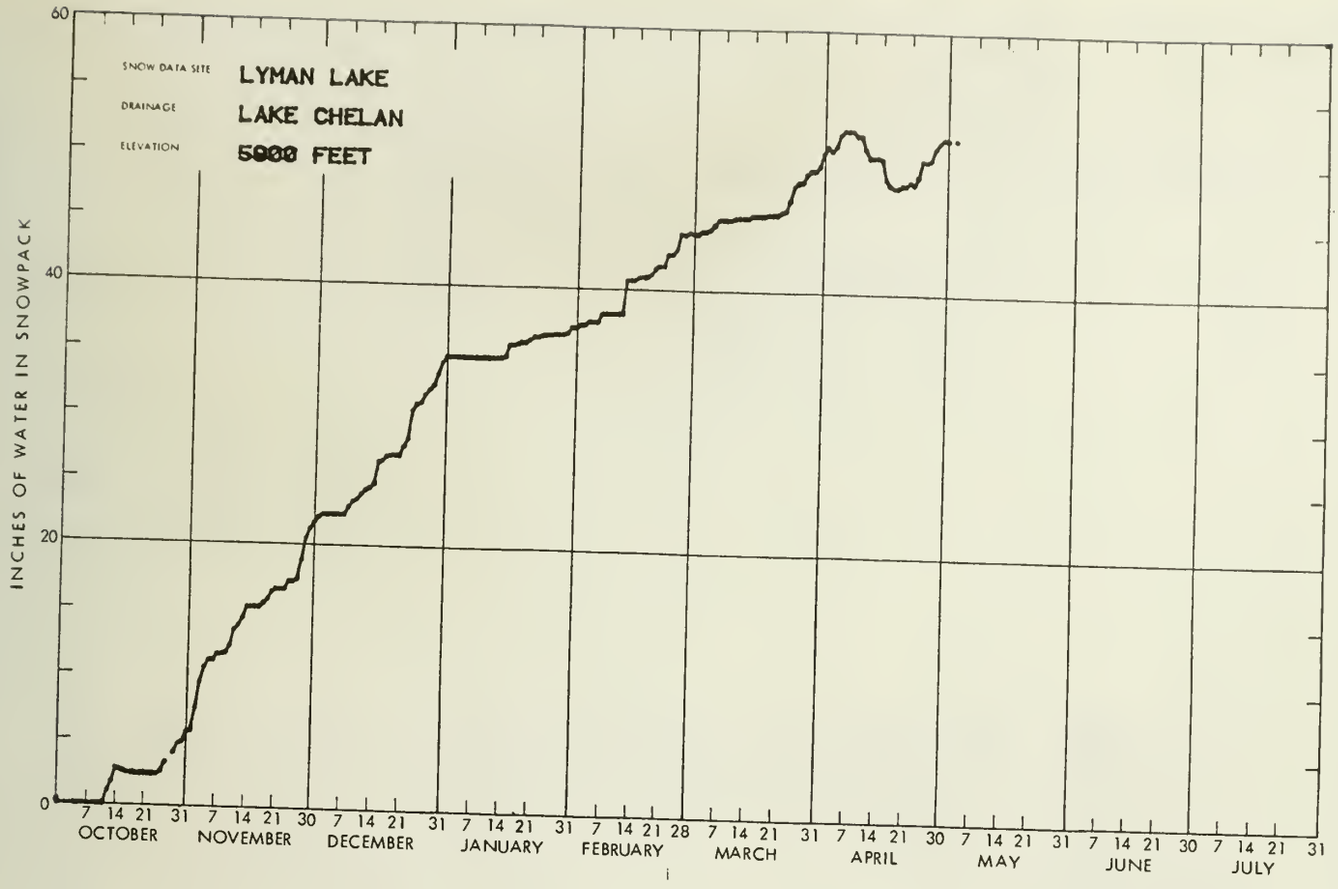
JUNE
JULY


SNOW DATA SITE
LYMAN LAKE
DRAINAGE
LAKE CHELAN
ELEVATION
5000 FEET
INCHES OF WATER IN SNOWPACK
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7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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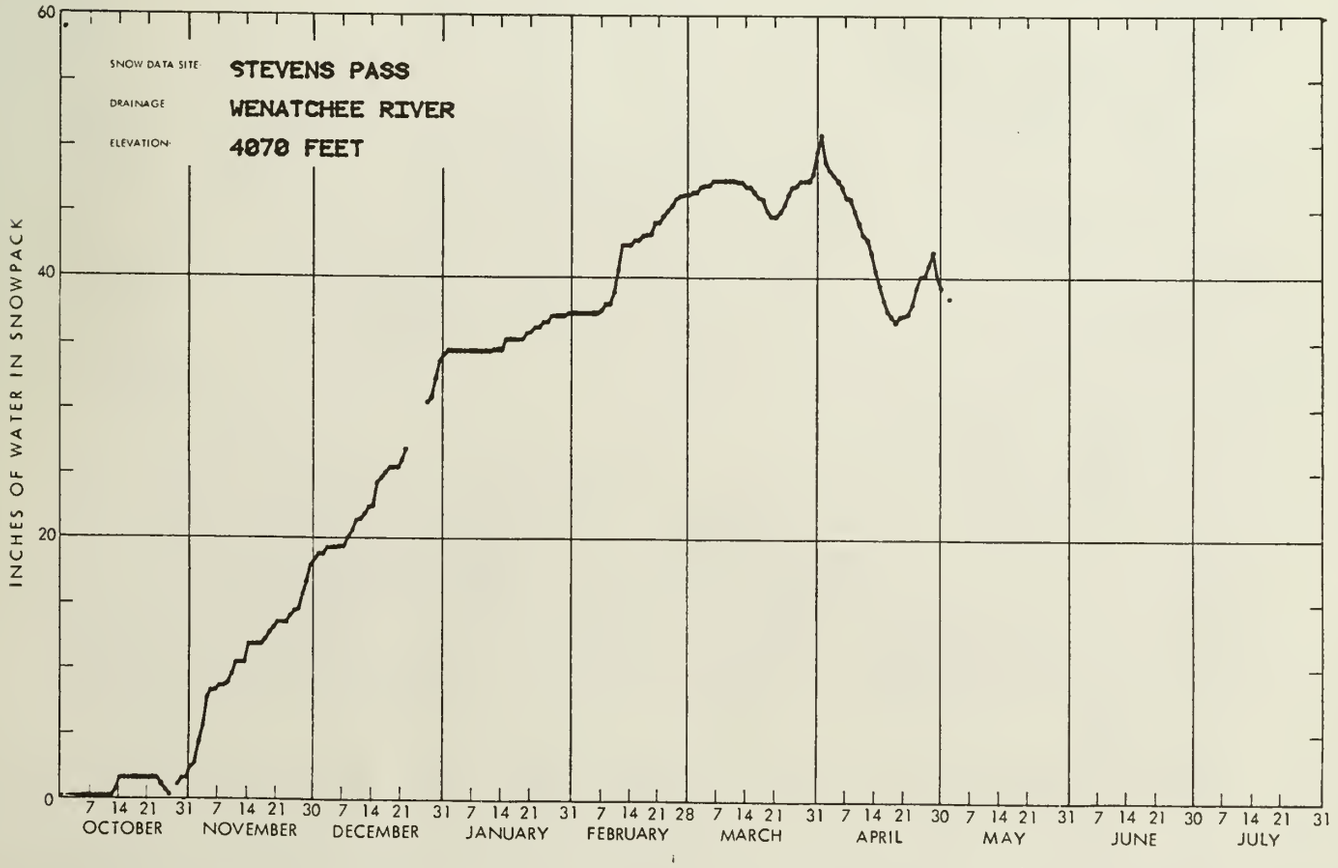
SNOW DATA SITE
STEVENS PASS
DRAINAGE
WENATCHEE RIVER
ELEVATION
4070 FEET
INCHES OF WATER IN SNOWPACK
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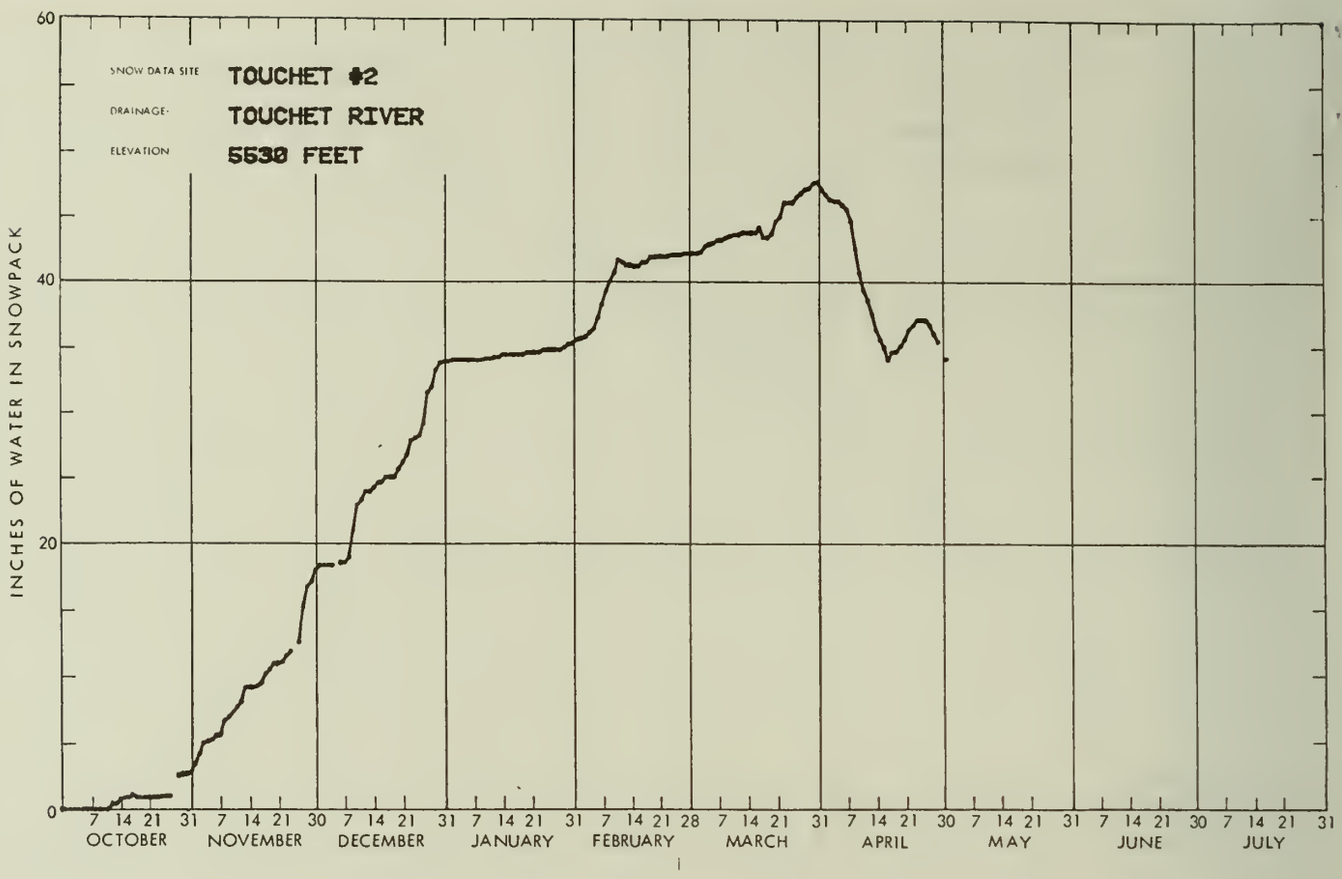
SNOW DATA SITE
TOUCHET #2
DRAINAGE
TOUCHET RIVER
ELEVATION
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INCHES OF WATER IN SNOWPACK
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7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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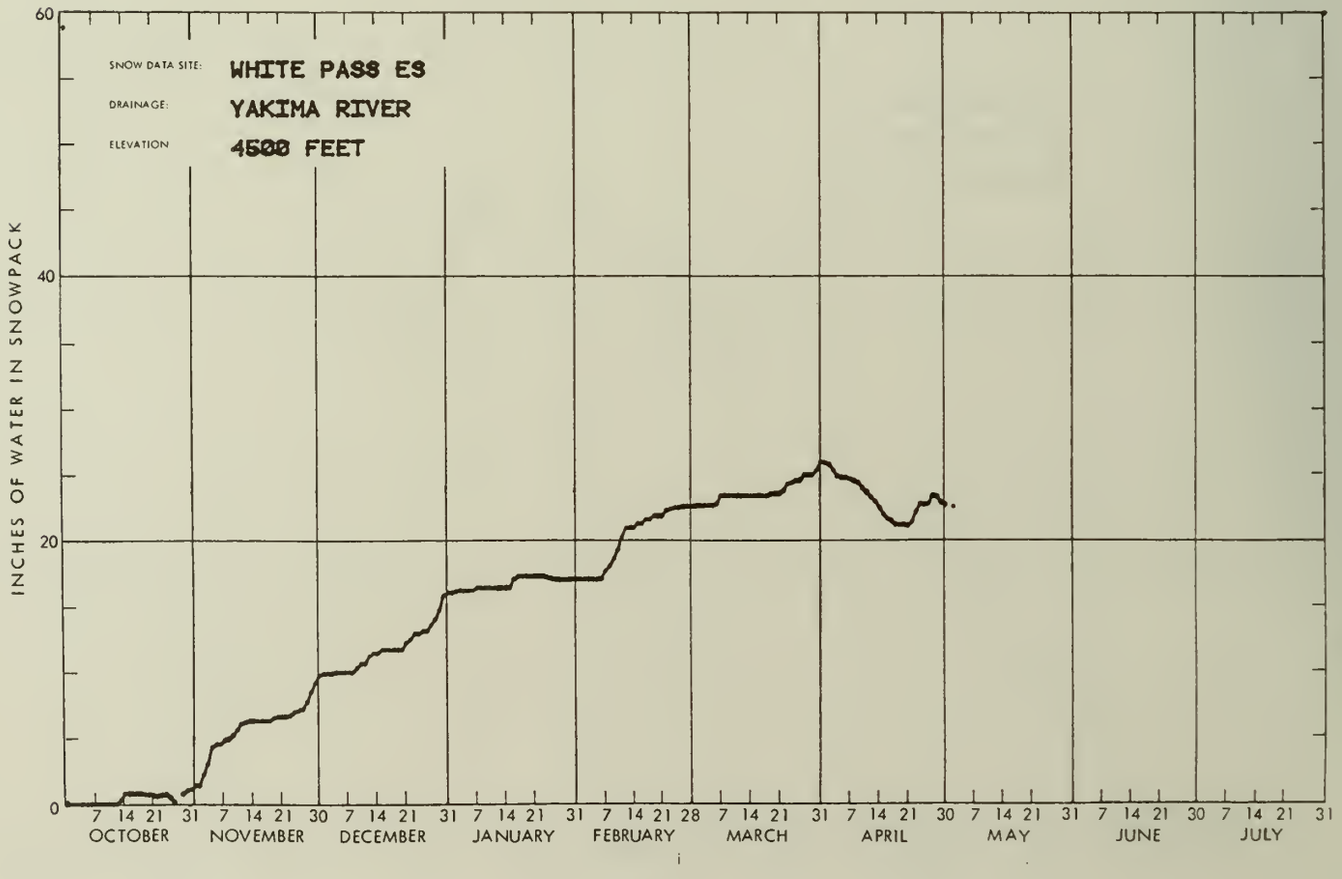
SNOW DATA SITE:
WHITE PASS ES
DRAINAGE:
YAKIMA RIVER
ELEVATION
4500 FEET
INCHES OF WATER IN SNOWPACK
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United States
Department of
Agriculture

**Soil
Conservation
Service**

Spokane,
Washington

Water Supply Outlook for Washington

as of JUNE 1, 1985

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University of Illinois
at Urbana-Champaign

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: "Snow scene along trail to Mt. Hood test site snow course"

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P.O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	P.O. Box 98, Bozeman, Montana 59715
Nevada	P.O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4402 Federal Bldg., 125 South State St., Salt Lake City, Utah 84147
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P.O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 — for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 — for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 — and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.

WATER SUPPLY OUTLOOK FOR WASHINGTON

and

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

ISSUED BY

PETER C. MYERS
Chief
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

RELEASED BY

LYNN A. BROWN
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

FORECASTS BY

SOIL CONSERVATION SERVICE
WATER SUPPLY FORECASTING STAFF, WNTC
PORTLAND, OREGON
and
NATIONAL WEATHER SERVICE
RIVER FORECAST CENTER
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REPORT PREPARED BY

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360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201

WATER SUPPLY OUTLOOK

State of Washington

JUNE 1, 1985

Stored irrigation water is the only bright spot in the water supply outlook for the State of Washington. Reservoir storage in the Yakima Basin is above average for June 1. Snow cover statewide is near 60% of average. Of the 36 SNOTEL sites in Washington, 20 sites are bare of snow as of June 1st. In 1984 only three of the sites reported no snow on June 1. Near average temperatures for May have kept streamflows to about normal.

****

THIS IS THE LAST WATER SUPPLY REPORT FOR 1985. IF YOU WISH TO RECEIVE THESE REPORTS NEXT YEAR, PLEASE RETURN THE BACK COVER OF THE MAY 1 REPORT, IF YOU HAVE NOT ALREADY DONE SO.

****

SNOW COVER

The June 1 report contains only the data on snow courses actually read this month. This consists of 15 manual snow course readings and 36 SNOTEL readings. Many of the basins have no snow courses being read this month. For the basins where an average can be computed the snow cover is down from last month. For example the Pend Oreille last month was 91% this month its 65%, the Spokane River last month 104% this month 66%.

PRECIPITATION

Precipitation was below average over most of the state, with the exception of the Okanogan River at 110% of normal. Northeastern Washington had 73% of average, while the Southeastern area had 99%. The southwest area had the lowest average with 60% of normal precipitation falling in May. The northwest side of the Cascades was also below average with 78%.

RESERVOIR STORAGE

Washington s stored water supplies are the only bright spot where irrigators are concerned. Irrigation reservoirs are storing 933,100 acre feet of water in the Yakima, 102% of normal. The reservoirs in the Okanogan Irrigation District are above average at 120%. Lake Chelan at 428,200 acre feet, is 95% of normal. Power reservoirs in the Skagit area are at 99% of normal up from 66% of average for May 1.

STREAMFLOW

Temperatures during May returned to near normal over most of the state with the exceptions being the Omak area with 5 degrees above normal. Streams flows in the state had the following average flows for May; the Pend Oreille River 97%, Spokane River 101%, Yakima River 79%, the Wenatchee River at 94%, the Walla Walla River had 85%, the Cowlitz River had 126%.

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured (MAY 1) 1985	1984	1983	Normal*
		COLUMBIA				
Spokane	Coeur d'Alene Lake	225.1	262.0	289.5	235.2	225.0
Columbia	Franklin D. Roosevelt Lake	5232.0	1661.6	2389.3	2350.1	2565.6
Columbia	Banks Lake	714.9	685.5	674.8	648.0	406.2
Okanogan	Conconully Reservoir	13.0	11.8	13.3	13.5	9.1
Okanogan	Conconully Lake	10.5	10.5	10.4	10.4	9.4
Chelan	Lake Chelan	676.1	428.2	341.8	566.0	450.6
		YAKIMA				
Yakima	Keechelus Lake	157.8	154.0	157.2	156.8	139.6
Kachess	Kachess Lake	239.0	236.7	238.2	238.6	217.1
Cle Elum	Lake Cle Elum	436.9	352.4	421.8	435.8	367.9
Bumping	Bumping Lake	33.7	32.8	33.6	33.6	25.4
Tieton	Rimrock Lake	198.0	157.2	195.0	195.0	160.2
		PUGET SOUND				
Skagit	Ross Reservoir	1404.1	1011.5	921.5	1001.7	1033.9
Skagit	Diablo Reservoir	90.6	86.8	82.9	85.9	86.1
Skagit	Gorge Reservoir	9.8	8.2	7.4	7.4	8.3

1/ Based on Active Storage
* 15-yr. Average 1963-1977

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of washington stream basins presents the water content of the snow about MAY 1, 1985, as percent of the same date in 1984 and average of record.

Tributary Basin	No. of Courses	1985 Snow Water Expressed as percent of 1984	Average 1961-80
UPPER COLUMBIA BASIN			
Pend Oreille	4	63	65
Kettle	0		
Colville	0		
Spokane	2	74	66
Okanogan	0		
Methow	1		
Chelan			
Entiat	2		
Wenatchee	2	56	55
Yakima	5		
Ahtanum	0		
LOWER COLUMBIA BASIN			
Mill Creek	0		
Cowlitz	2		
PUGET SOUND			
White	1		
Green	0		
Snoqualmie	0		
Skykomish	2	56	55
Skagit	0		
Baker	0		
OLYMPIC PENNINSULA			
Morse	0		
Elwha	0		
Dungeness	0		

PRECIPITATION 1/

Division Average Observations and Departures

Drainage Divisions	Fall Sept-Oct 1984 2/ Observed	Departure	Winter Nov. 1984 - Mar. 1985 2/ Observed	Departure	Spring Apr-May 1985 Observed	Departure
Northeastern Wash	1.83	-0.65	9.02	- 0.23	1.72	-1.24
Southeastern Wash	2.22	-0.29	10.00	- 0.20	2.25	-0.66
East Slope Cascades	3.24	-1.51	20.04	- 7.31	3.13	+0.11
North Central Wash	1.54	-0.05	4.78	- 1.58	1.28	-0.48
Northwest Cascades	11.98	-1.23	40.18	-15.1	9.9	+0.21
Southwest Cascades	8.89	-4.59	28.96	-11.51	4.92	-1.9

Northeastern Washington	- Lower Spokane, Colville, Sandpoil, and - Lower Kettle Drainages
Southeastern Washington	- Touchet, Tucannon, and Palouse Drainages
East Slope Cascades	- Yakima, Wenatachee, and Chelan Drainages
North Central Washington	- Methow and Okanogan Drainages
Northwest Slope Cascades	- Puget Sound Drainages
Southwest Slope Cascades	- Lower Columbia Drainages

1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service.
2/ - Departure from 15-year (1958-1972) drainage division average.

WSFB-x4-L

SNOW DATA TO JUNE 1, 1985

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
UPPER COLUMBIA DRAINAGE							
PEND OREILLE RIVER							
Hoodoo Basin	15C10	6000	5/29	46	26.0	35.8	36.3
Hoodoo Creek	15C01	5900	5/29	50	28.6	31.6	35.6
Lookout	15B02	5250	5/31	12	6.4	9.0	13.3
Schweitzer Ridge	16A05	6100	5/29	26	13.4	40.6	29.9
KETTLE RIVER							
COLVILLE RIVER							
OMAK LAKE, TWIN LAKES							
SPOKANE RIVER							
Lookout	15B02	5250	5/31	12	6 4	9.0	13.3
Lost lake	15B14A	6000	5/31	65	31 2	42.1	43.4
NEWMAN LAKE							
OKANOGAN RIVER							
METHOW RIVER							
CHELAN LAKE BASIN							
ENTIAT RIVER							
Pope Ridge	20B20	3450	5/30	0	0.0		
Shady Pass	20A37	6200	5/30	0	0.0	21.6	20 4
WENATCHEE RIVER							
Stevens Pass	21B01	4070	5/30	51	26.5	37 3	35.8
Stevens Pass Sand Shed	21B45	3700	5/30	2	1 2	12.3	14 2
COLOCKUM CREEK							
Trough #2(SP)	20B25	5310	6/01		0 0sp	0.0	0.0
SQUILCHUCK CREEK							
STEMILT CREEK							

Average based on 1961 1980 averages
s SNOTEL data

WSFB-A4-L

SNOW DATA TO JUNE 1, 1985

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #
YAKIMA RIVER							
Bumping Lake Old	21C08	3450	5/30	0	0.0		
Bumping Lake New	21C36	3400	5/30	0	0.0		
Cayuse Pass	21C06	5300	5/29	114	62.9		
Tunnel Avenue	21B08	2450	5/29	0	0.0		
White Pass E. Side	21C28	4500	5/30	6	3.0		
LOWER COLUMBIA DRAINAGE							
AHTANUM CREEK							
MILL CREEK							
COWLITZ RIVER							
Cayuse Pass	21C06	5300	5/29	114	62.9		
White Pass E Side	21C28	4500	5/30	6	3.0		
PUGET SOUND DRAINAGE							
WHITE RIVER							
Cayuse Pass	21C06	5300	5/29	114	62.9		
GREEN RIVER							
SNOQUALMIE RIVER							
SKYKOMISH RIVER							
Stevens Pass	21B01	4070	5/30	51	26 5	37.3	35.8
Stevens Pass Sand Shed	21B45	3700	5/30	2	1.2	12.3	14.2
SKAGIT RIVER							
BAKER RIVER							
DUNGENESS RIVER							
MORSE CREEK							
ELWHA RIVER							
WYNOOCHEE RIVER							

+ Aerial stadia observation
# Average based on 1961-1980 average

WSFB-X4-L

SNOTEL READINGS JUNE 1, 1985

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (inches)	Last Year	Average
PEND OREILLE RIVER							
Bunchgrass Meadows	17A01	5000	05/15		18.5	27 5	
			05/30		0.0	20.7	14.0
OKANOGAN & METHOW RIVERS							
Harts Pass	20A05	6500	05/15		42 7	44.0	
			05/30		18.2	41.5	33.0
Salmon Meadows	19A02	4500	05/15		0.0	0 0	
			05/30		0.0	0.0	
CHELAN LAKE BASIN							
Lyman Lake	20A23	5900	05/15		43 9	72.6	
			05/30		32.5	74.8	74.8
Mirror Lake	20A39	5600	05/15		19.0	32.8	
			05/30		11.9	31.1	30.3
Park Creek Ridge	20A12	4600	05/15		27 6	32.8	
			05/30		0.0	24.4	17.6
Rainy Pass	20A09	4780	05/15		33.1	34.0	
			05/30		18.4	32.7	24.6
ENTIAT RIVER							
Pope Ridge	20B20	3450	05/15		.3	0.0	
			05/30		0.0	0.0	0.0
WENATCHEE RIVER							
Blewett Pass	20B02	4270	05/15		.4	1.0	
			05/30		0.0	1.5	0.4
Lyman Lake	20A23	5900	05/15		43.9	72.6	
			05/30		32.5	74.8	74.8
Stevens Pass	21B01	4070	05/15		30.4	32.7	
			05/30		0.1	22.7	21.0
Trough # 2	20B25	5300	05/15		1.0	0.0	
			05/30		0.0	0.0	0.0
COLOCKUM CREEK							
Trough # 2	20B25	5300	05/15		0.1	0.0	
			05/30		0.0	0.0	0.0
STEMILT CREEK							
Upper Wheeler	20B07	4400	05/15		0.0	2 4	
			05/30		0.0	0.0	0.0

WSFB-22-L

SNOTEL READINGS, JUNE 1, 1985

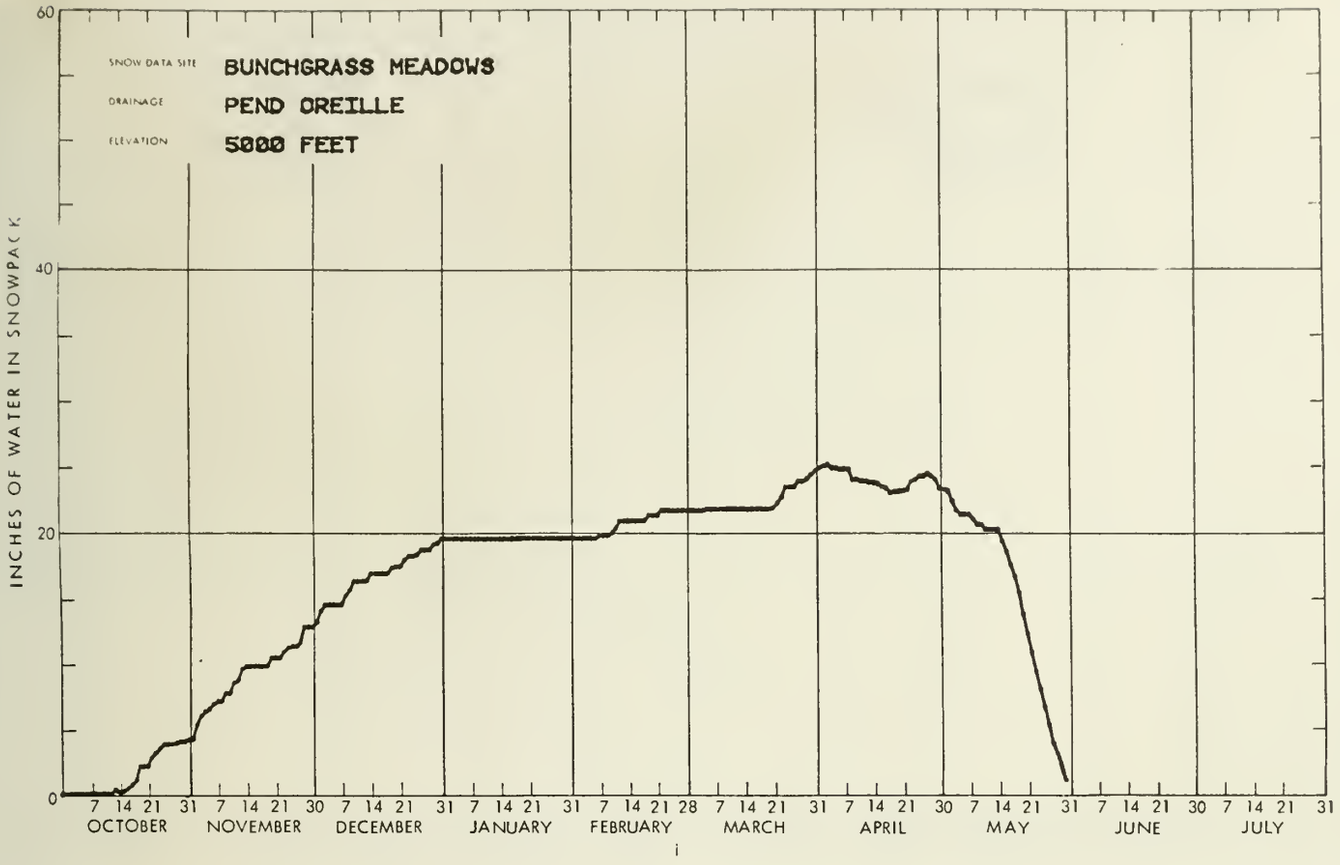
SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average
YAKIMA RIVER							
Big Boulder Creek	21B09	3200	DISCONTINUED				
Bumping Ridge	21C38	4600	05/15	24.9	28.2		
			05/30		22.4	5.6	
Corral Pass	21B13	6000	05/15		7.2		
			05/30			11.1	
Fish Lake	21B04	3371	05/15	24.6	32.2		
			05/30	0.0	16.7	16.7	
Green Lake	21C10	6000	05/15	10.8	20.3		
			05/30	0.0	11.9	12.6	
Grouse Camp	20B11	5385	05/15	0.1	11.1		
			05/30	0.0	0.0	0.5	
Morse Lake	21C17	5400	05/15	42.1	23.2		
			05/30	24.0	46.7	53.5	
Sasse Ridge	21C40	4400	05/14	14.5			
			05/30	0.0			
White Pass E. Side	21C28	4500	05/15	19.3	23.1		
			05/30	5.7	18.0	12.3	
AHTANUM CREEK							
Green Lake	21C10	6000	05/15	10.8	20.3		
			05/30	0.0	11.9	12.6	
TOUCHET RIVER							
Touchet # 2	17C5	5530	05/15	24.7	26.4		
			05/30	0.0	9.9	9.7	
LEWIS RIVER							
June Lake	22C09	3200	05/15	26.5			
			05/30	0.0			
Lone Pine Shelter	21C26	3800	05/15	42.6	39.2		
			05/30	25.4	36.1	18.9	
Plains of Abraham	22C01	4400	05/15	83.7	99.6		
			05/30	44.5	73.1	41.7	
Sheep Canyon	22C10	4050	05/15	45.9	44.7		
			05/30		36.9	36.9	
Spencer Meadow	21C20	3400	05/15				
			05/30				
Surprise Lake	21C13	4250	05/15	46.1	59.6		
			05/30	24.3	47.7	32.3	

WSFB-x1-L

SNOTEL READINGS, JUNE 1, 1985

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (inches)	Last Year	Average
COWLITZ RIVER							
Pigtail Peak	21C33	5900	05/15		52.7	54.5	
			05/30		38.7	51.3	36.6
Potato Hill	21C14	4500	05/15		18.5	16.4	
			05/30		0.0	4.8	4.8
Sheep Canyon	22C10	4050	05/15		45.9	44.7	
			05/30			36.9	36.9
Strawberry Landing	22C08	3280	05/15		50.9		
			05/30		28.9		
Steppes PC	22C11		05/15				
			05/30		0.0		
Spirit PC	22C12		05/15		0.0		
			05/30		0.0	0.0	
NISQUALLY RIVER							
Paradise Park	21C35	5500	05/15		73.9	22.1	
			05/30		63.9	20.8	23 8
WHITE RIVER							
Corral Pass	21B13	6000	05/15				
			05/30				11.1
Morse Lake	21C17	5400	05/15		42.1	23.2	
			05/30		24.0	46.7	53.5
GREEN RIVER							
Cougar Mountain	21B42	3200	05/15		12.8	13.0	
			05/30		0.0	3.0	1.1
Stampede Pass	21B10	3960	05/15		45.4	43.9	
			05/30		21.5	36.0	23.7
SNOQUALMIE RIVER							
Olallie Meadows East	21B55	3960	05/15		67.4	56.5	
			05/30		50.7	45.2	37.8


SNOW DATA SITE
BUNCHGRASS MEADOWS
DRAINAGE
PEND OREILLE
ELEVATION
5000 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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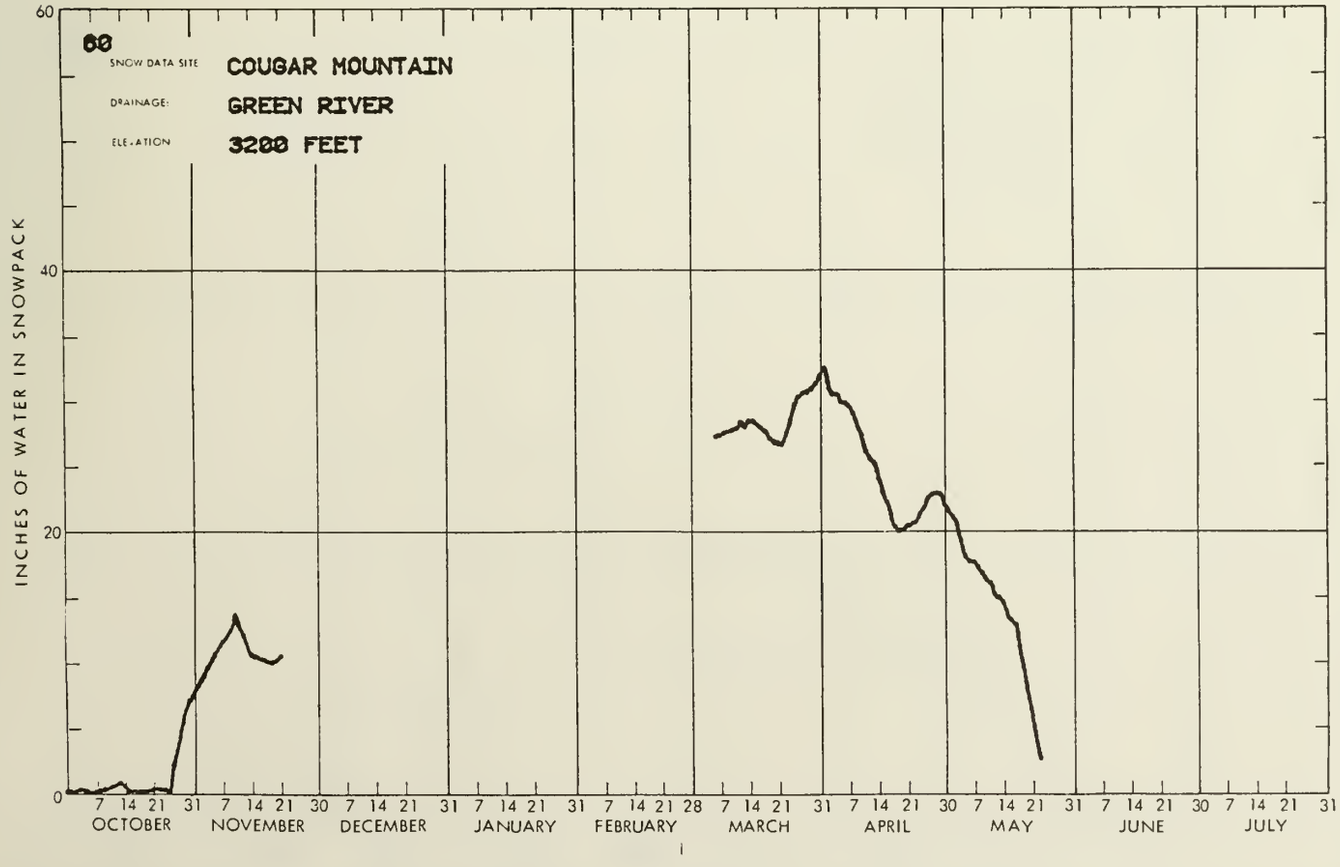
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SNOW DATA SITE
COUGAR MOUNTAIN
DRAINAGE:
GREEN RIVER
ELEVATION
3200 FEET
INCHES OF WATER IN SNOWPACK
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20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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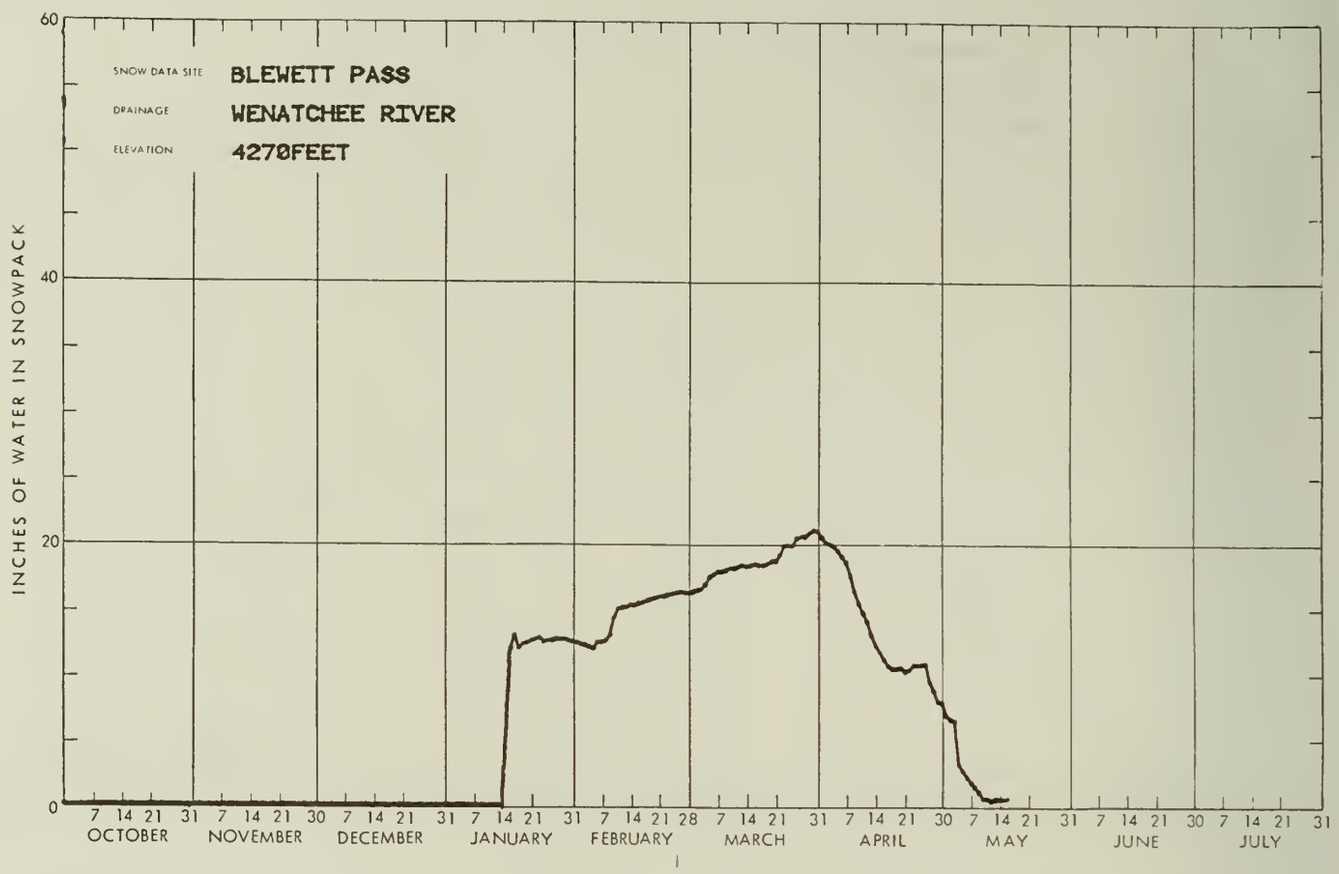
SNOW DATA SITE
BLEWETT PASS
DRAINAGE
WENATCHEE RIVER
ELEVATION
4270FEET
INCHES OF WATER IN SNOWPACK
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20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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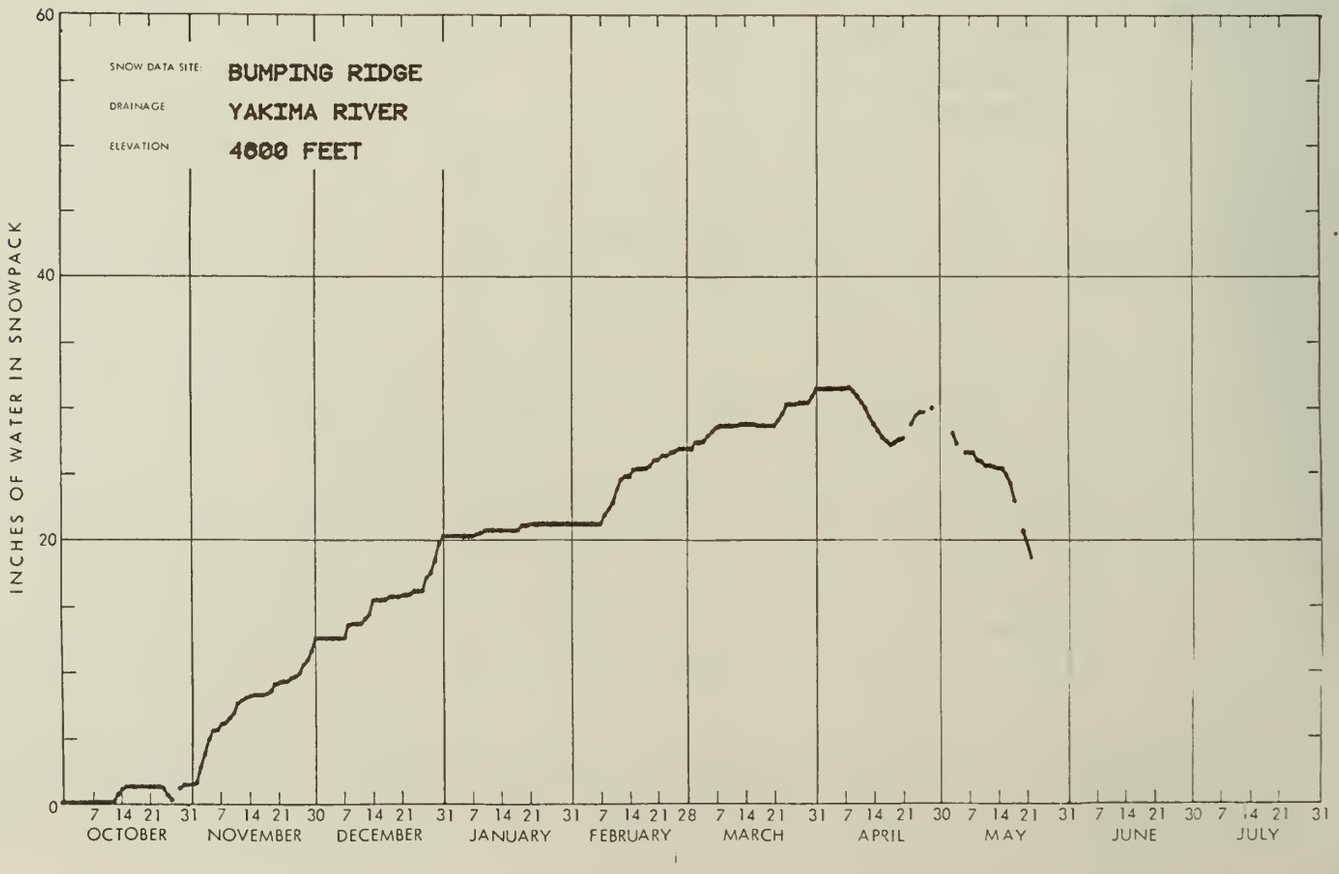
SNOW DATA SITE:
BUMPING RIDGE
DRAINAGE
YAKIMA RIVER
ELEVATION
4000 FEET
INCHES OF WATER IN SNOWPACK
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40
20
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7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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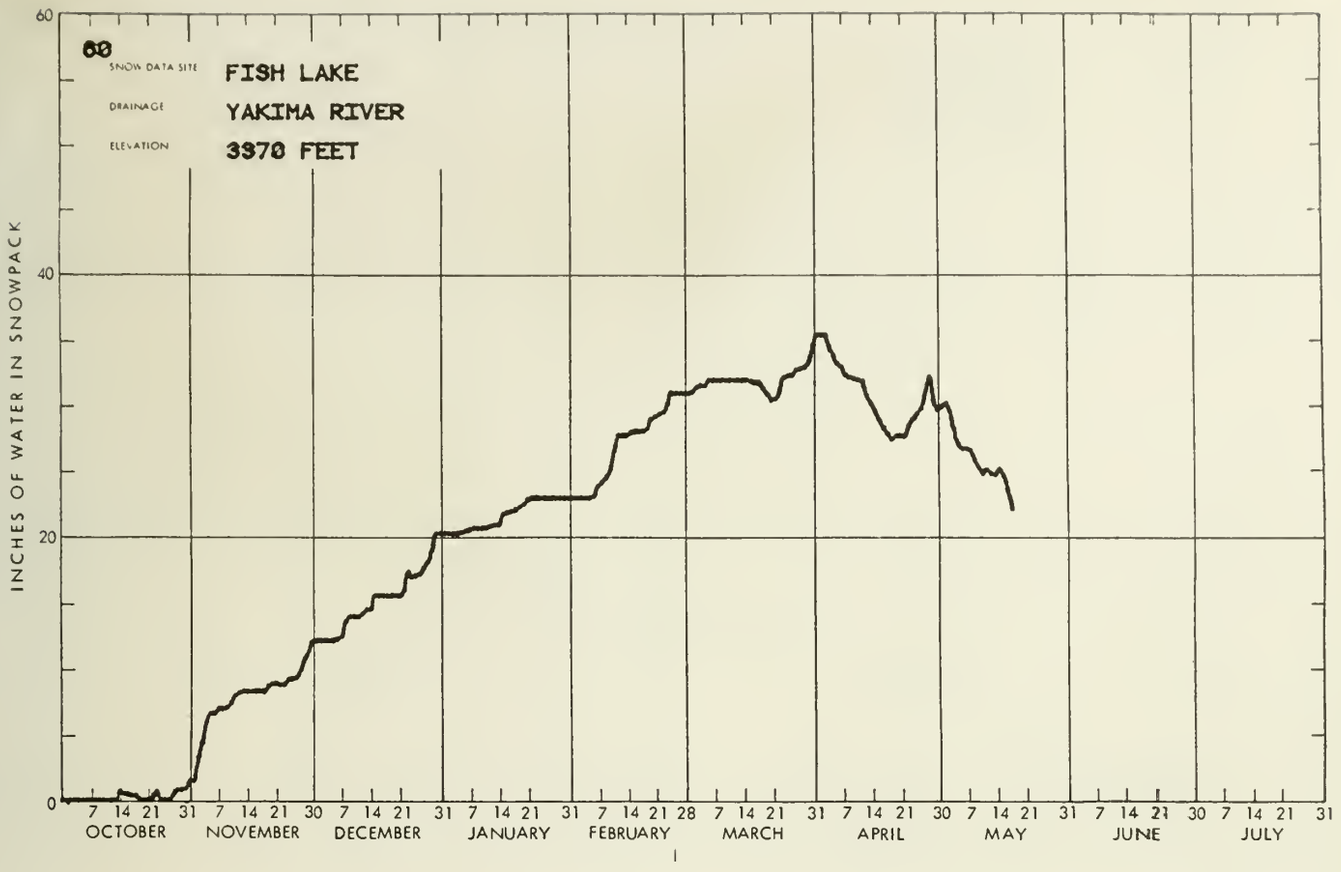
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SNOW DATA SITE
FISH LAKE
DRAINAGE
YAKIMA RIVER
ELEVATION
3370 FEET
INCHES OF WATER IN SNOWPACK
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40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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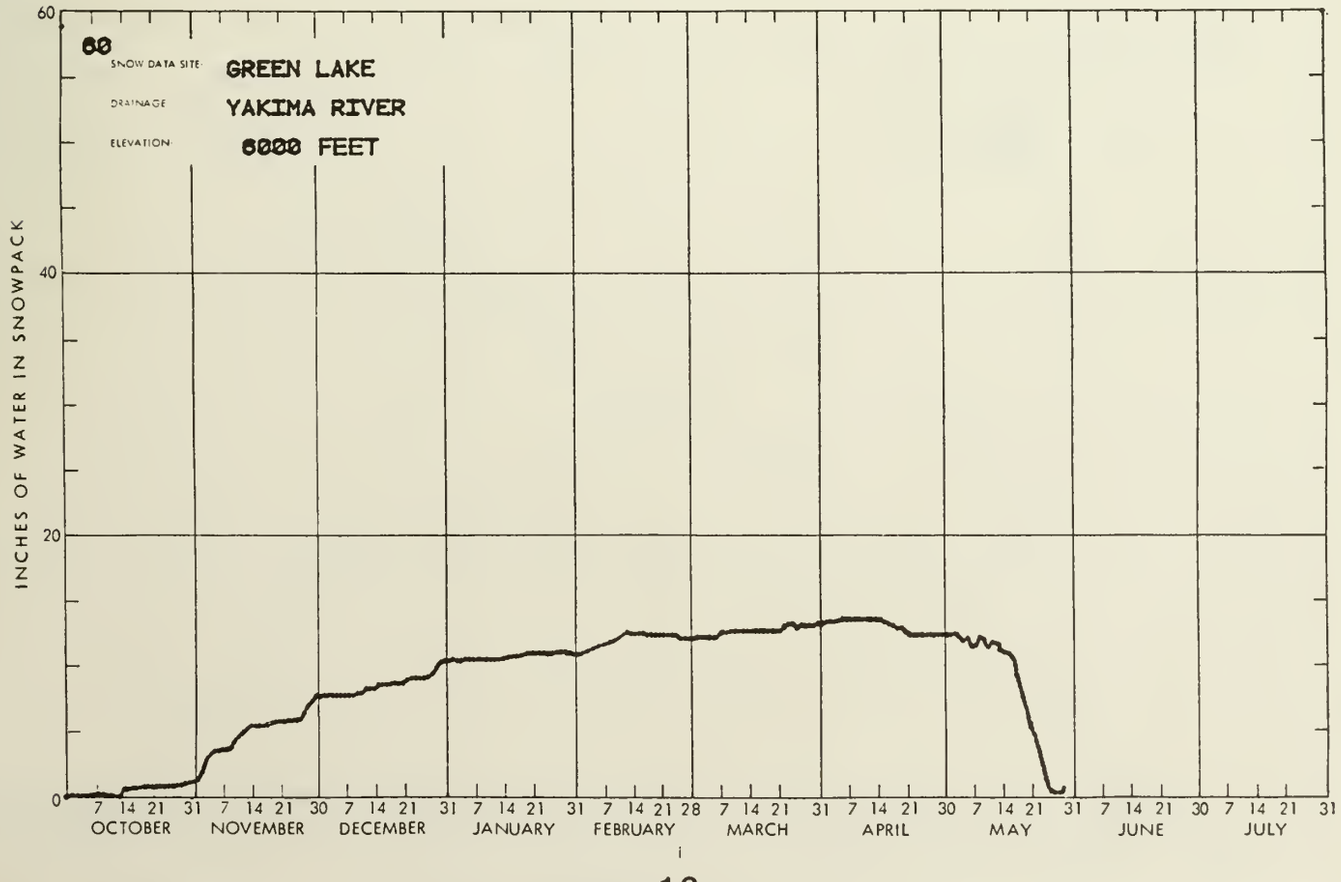
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SNOW DATA SITE
GREEN LAKE
DRAINAGE
YAKIMA RIVER
ELEVATION
6000 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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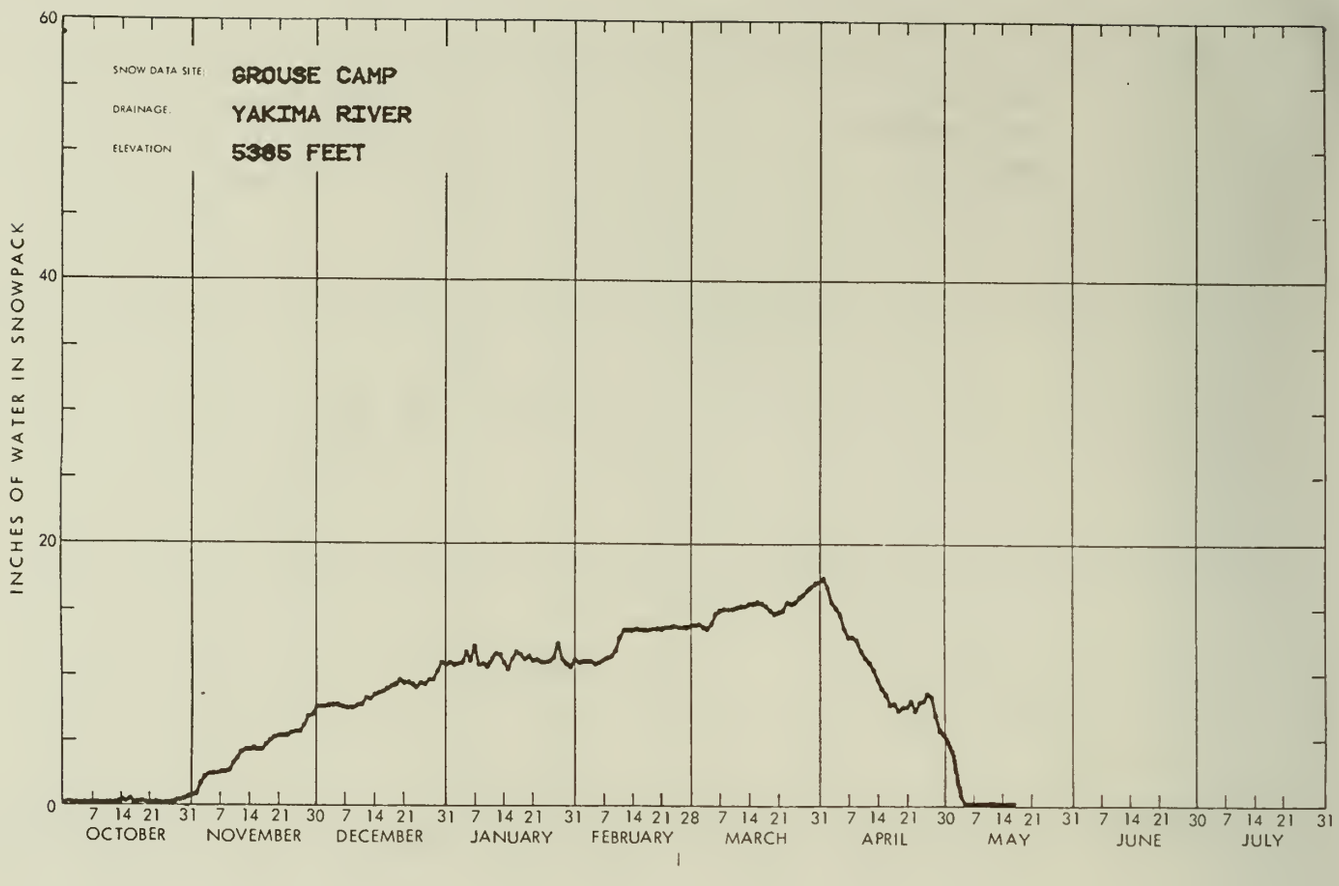
SNOW DATA SITE: GROUSE CAMP
DRAINAGE: YAKIMA RIVER
ELEVATION: 5385 FEET
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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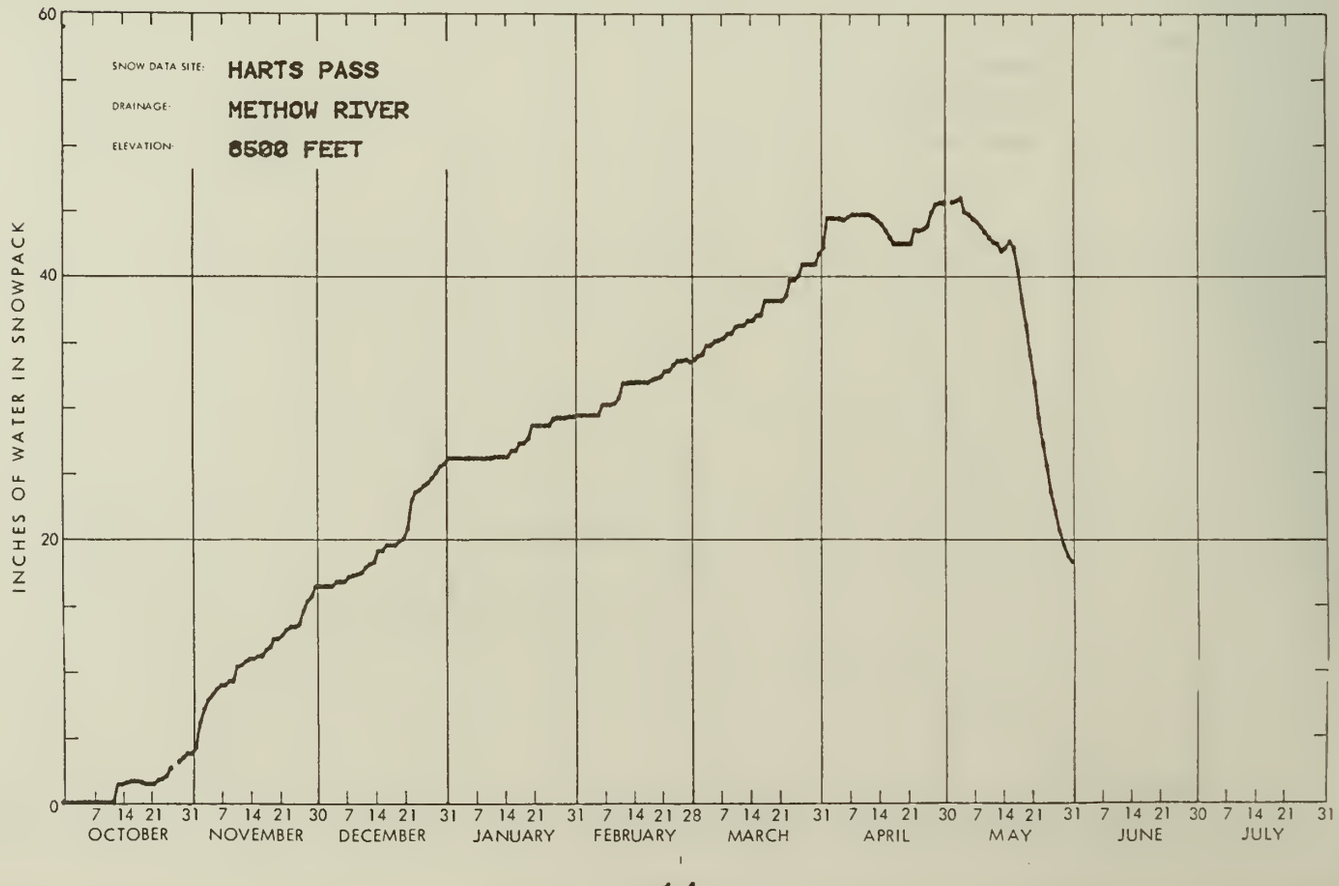
SNOW DATA SITE: HARTS PASS
DRAINAGE: METHOW RIVER
ELEVATION: 6500 FEET
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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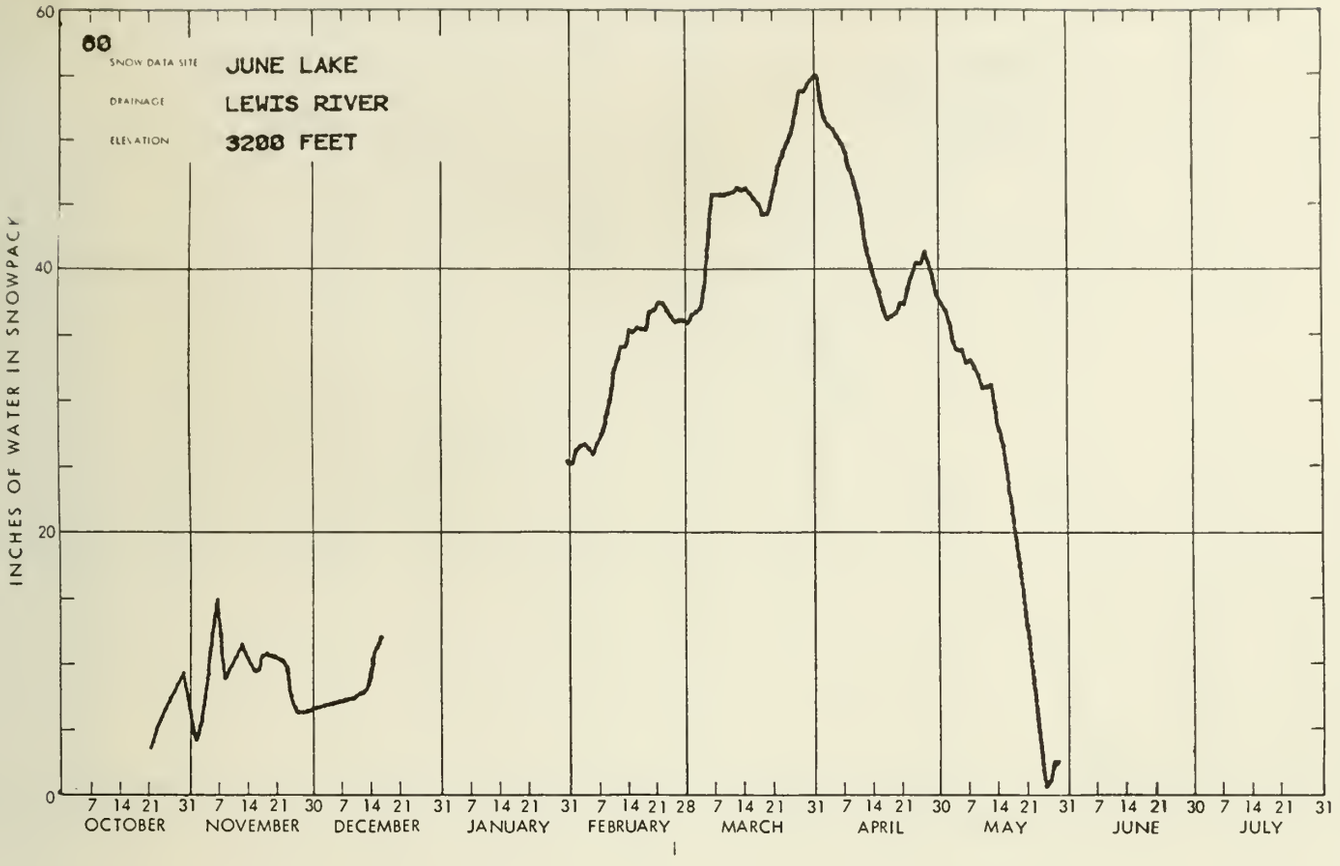
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SNOW DATA SITE
JUNE LAKE
DRAINAGE
LEWIS RIVER
ELEVATION
3200 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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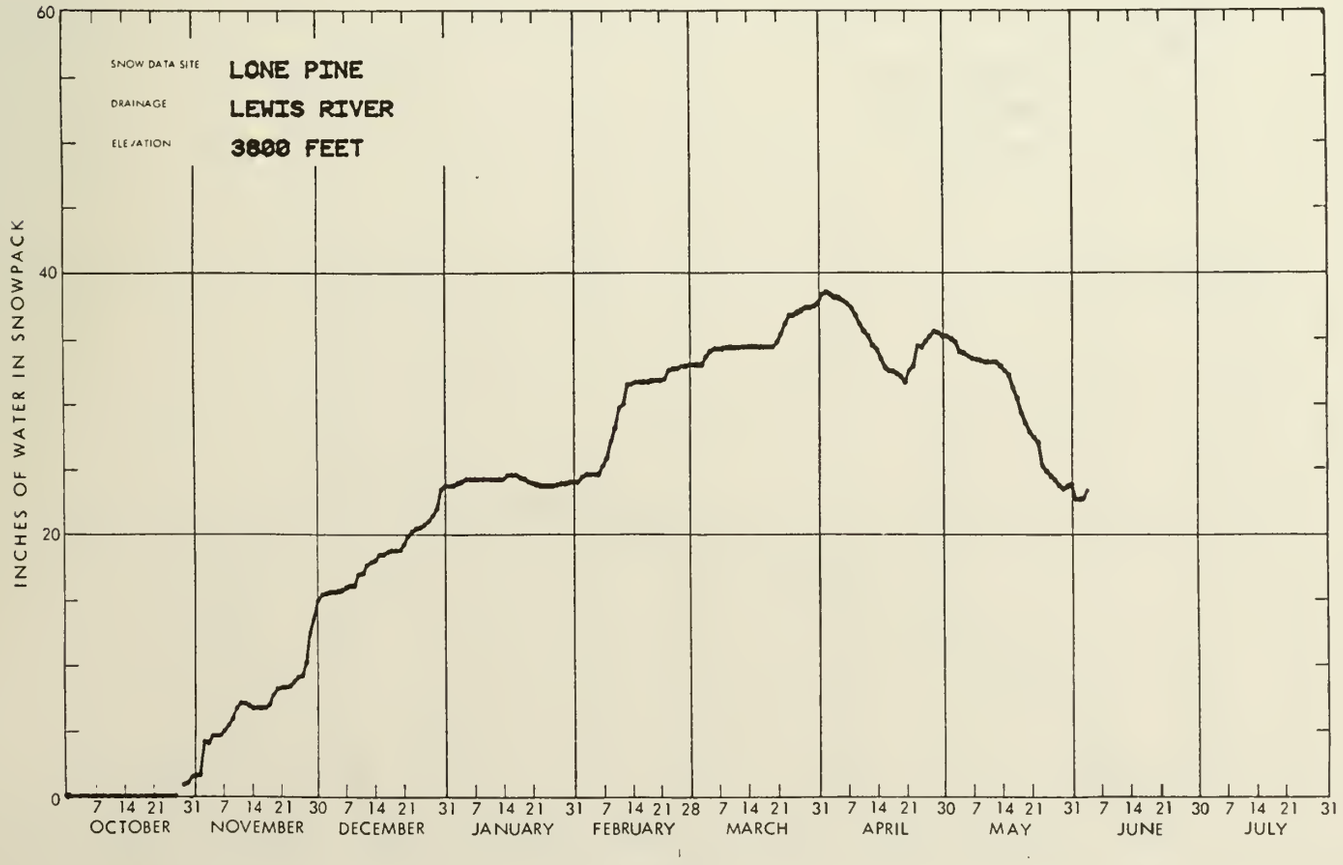
SNOW DATA SITE
LONE PINE
DRAINAGE
LEWIS RIVER
ELEVATION
3800 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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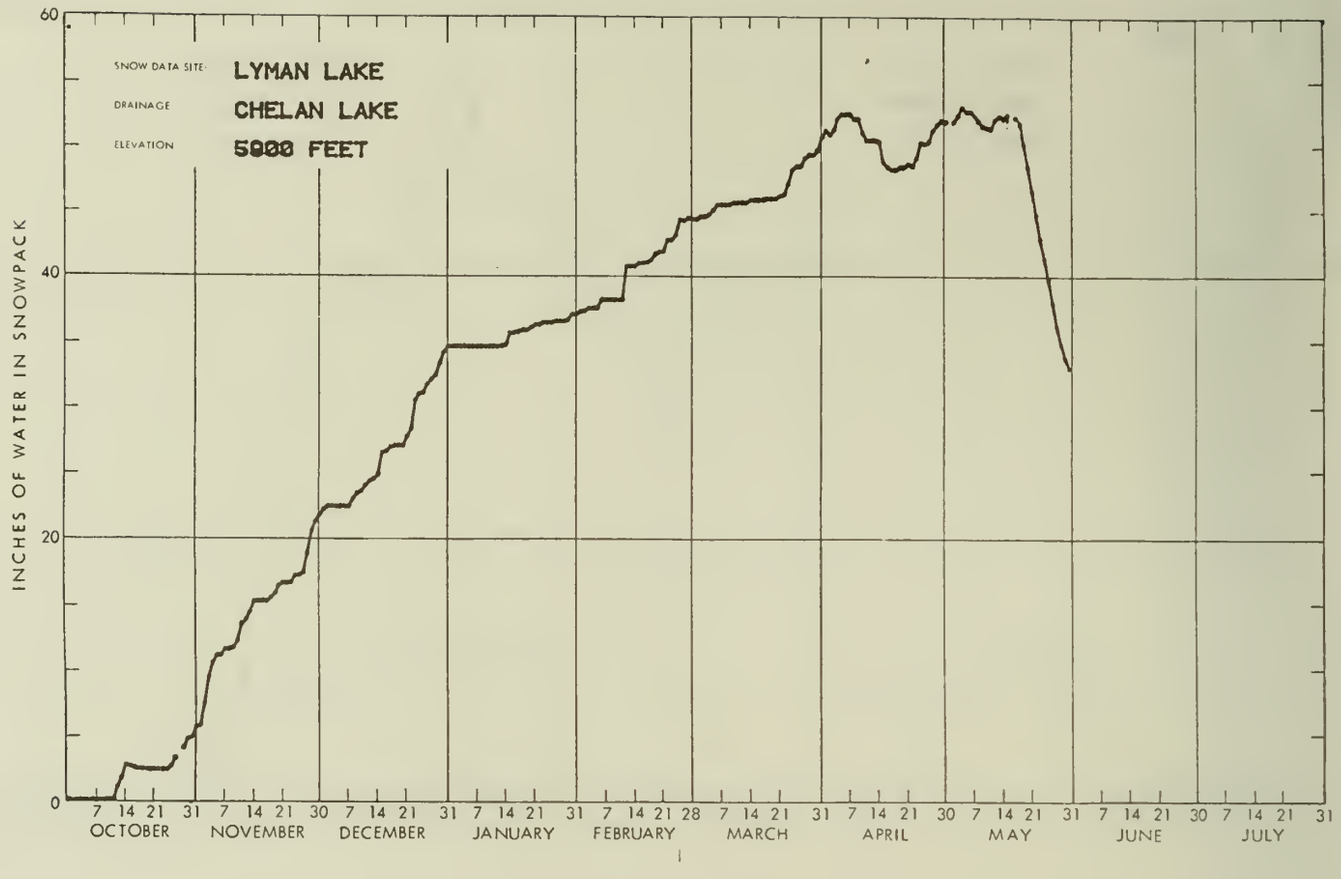
SNOW DATA SITE: LYMAN LAKE
DRAINAGE CHELAN LAKE
ELEVATION 5000 FEET
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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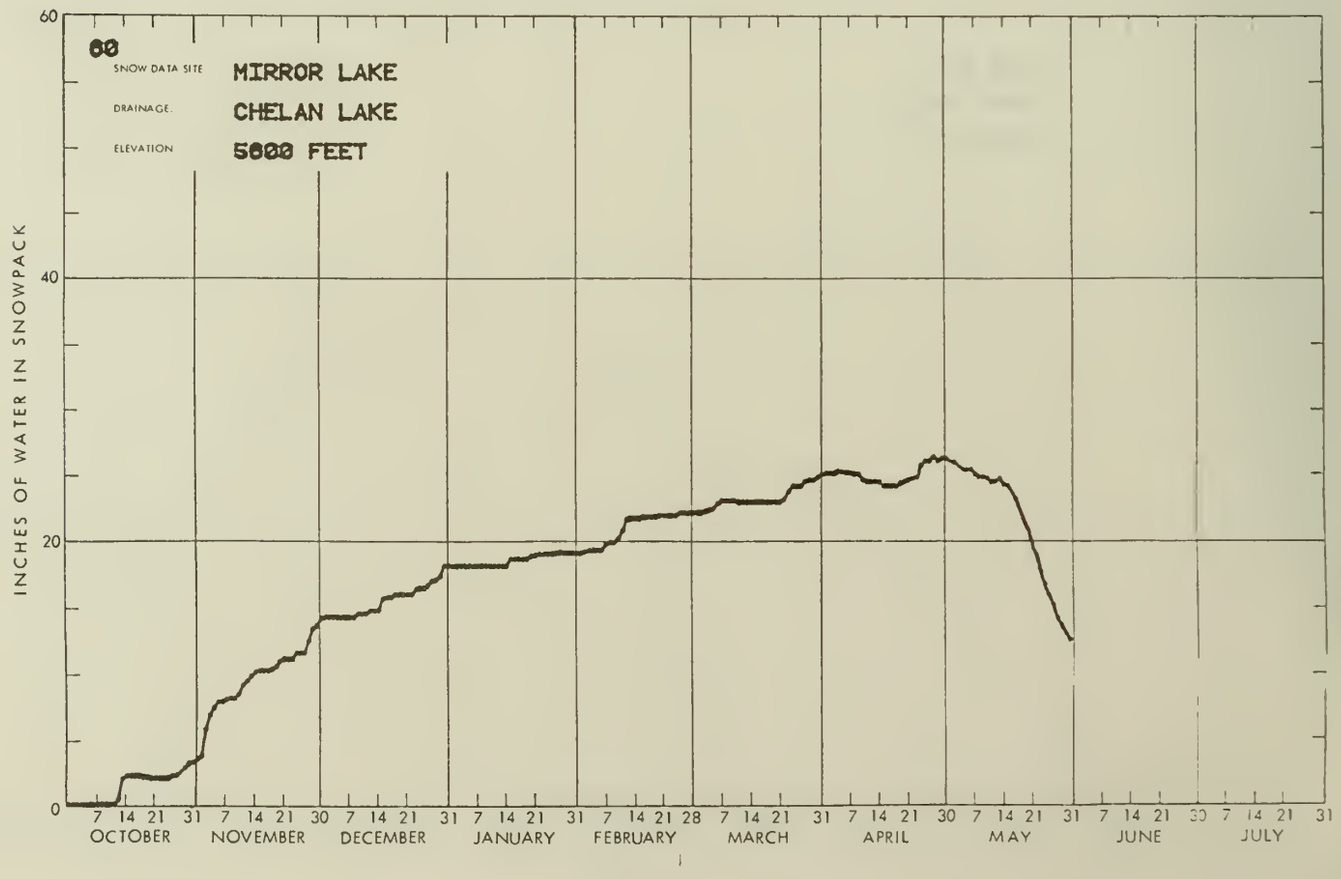
SNOW DATA SITE MIRROR LAKE
DRAINAGE CHELAN LAKE
ELEVATION 5000 FEET
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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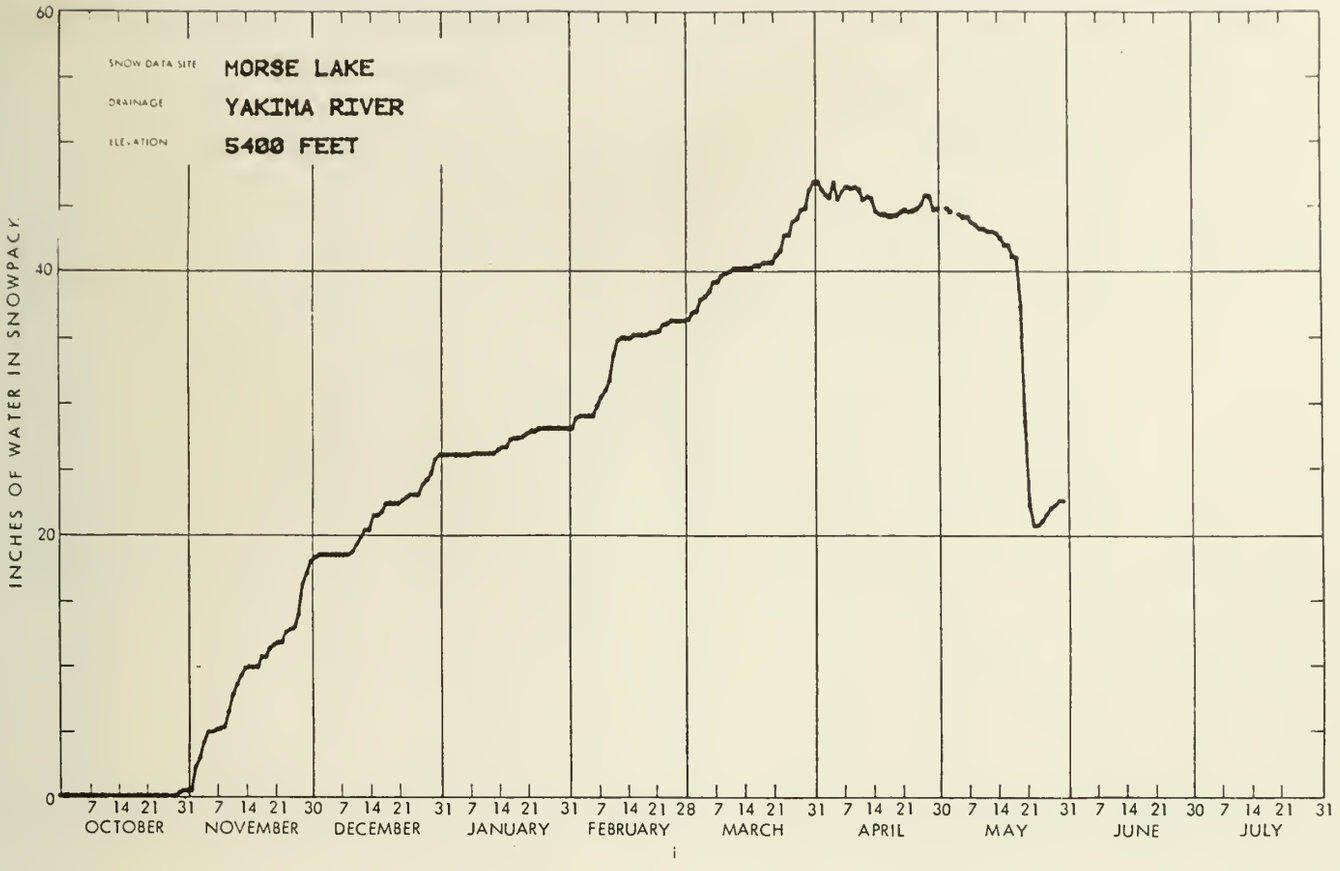
SNOW DATA SITE
MORSE LAKE
DRAINAGE
YAKIMA RIVER
ELEVATION
5400 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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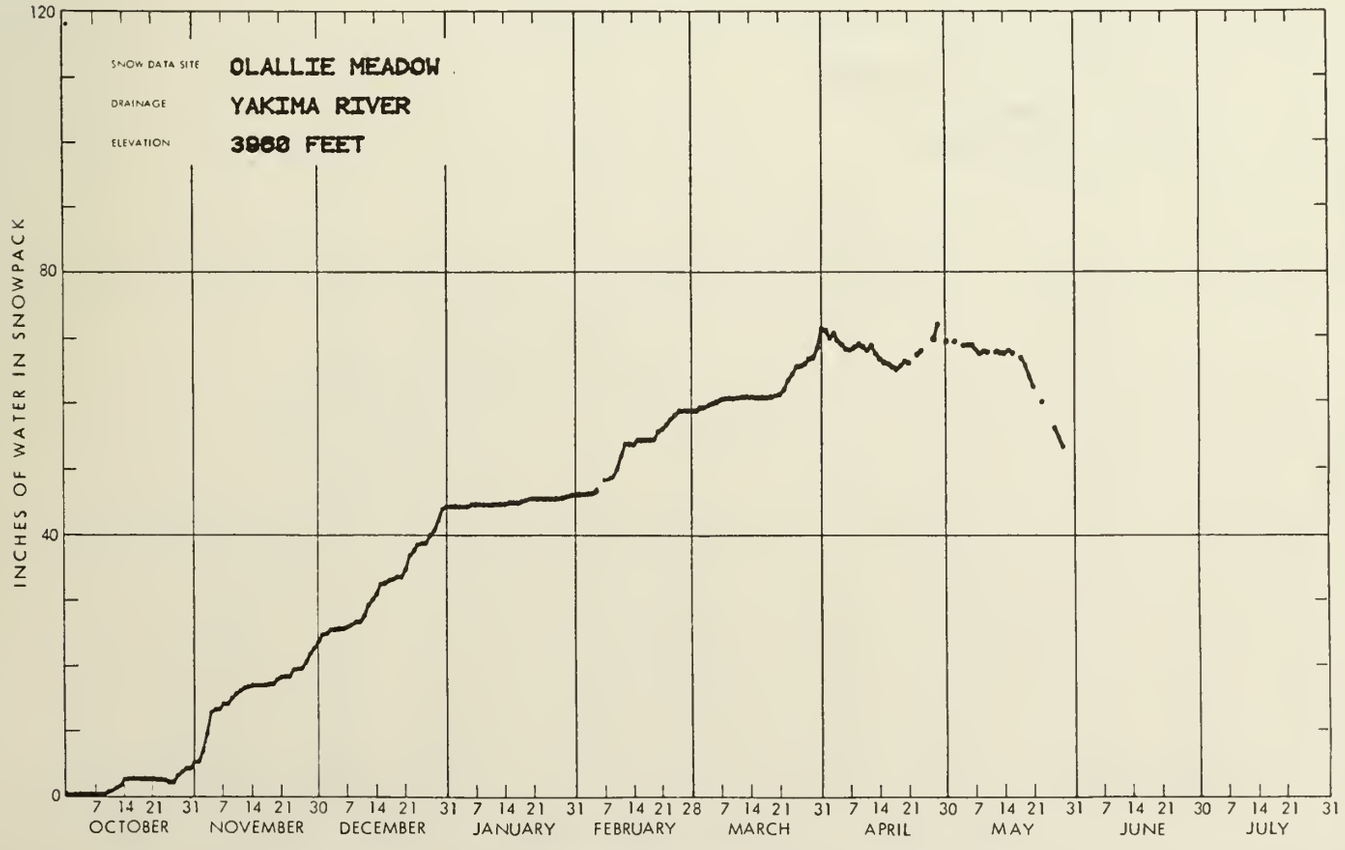
SNOW DATA SITE
OLALLIE MEADOW
DRAINAGE
YAKIMA RIVER
ELEVATION
3900 FEET
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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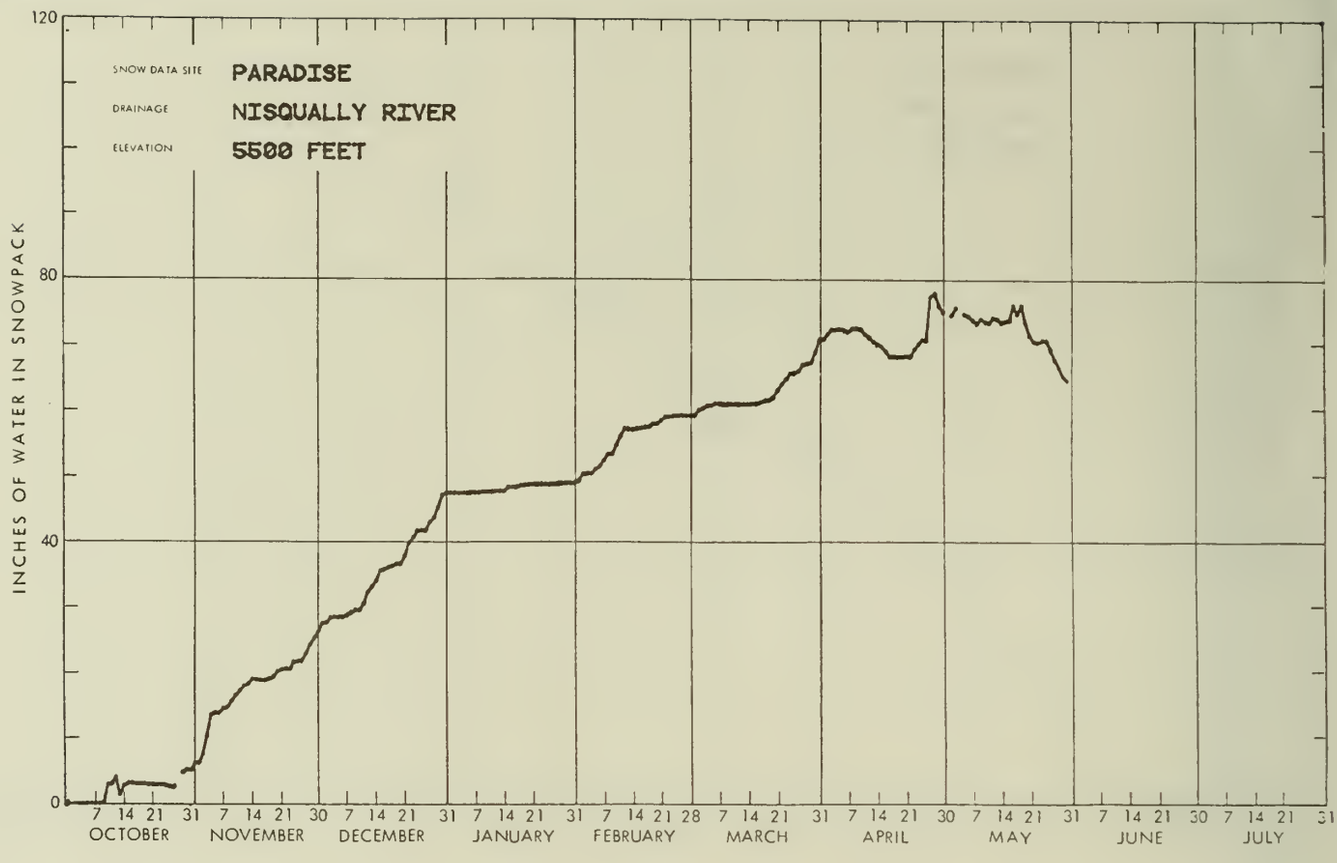
SNOW DATA SITE PARADISE
DRAINAGE NISQUALLY RIVER
ELEVATION 5500 FEET
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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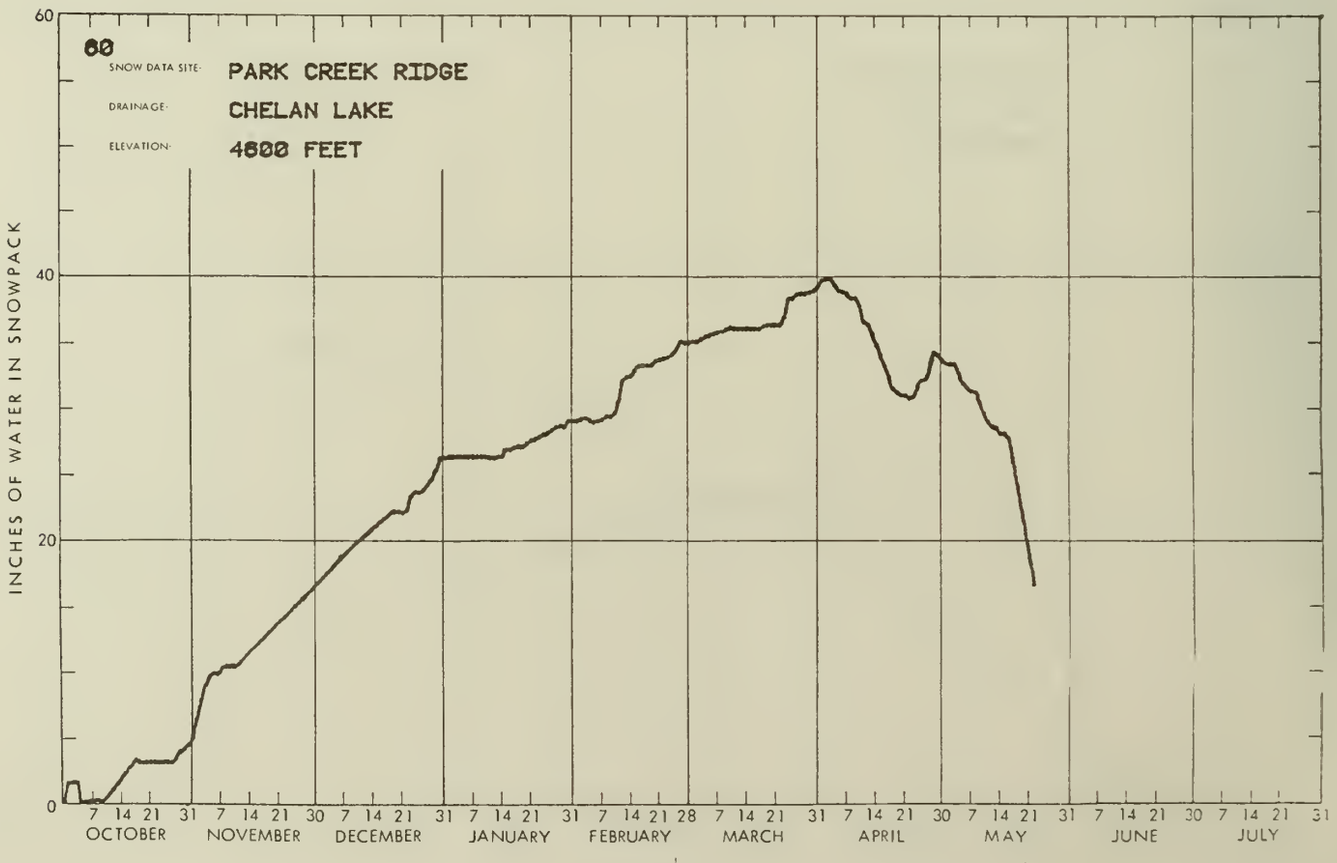
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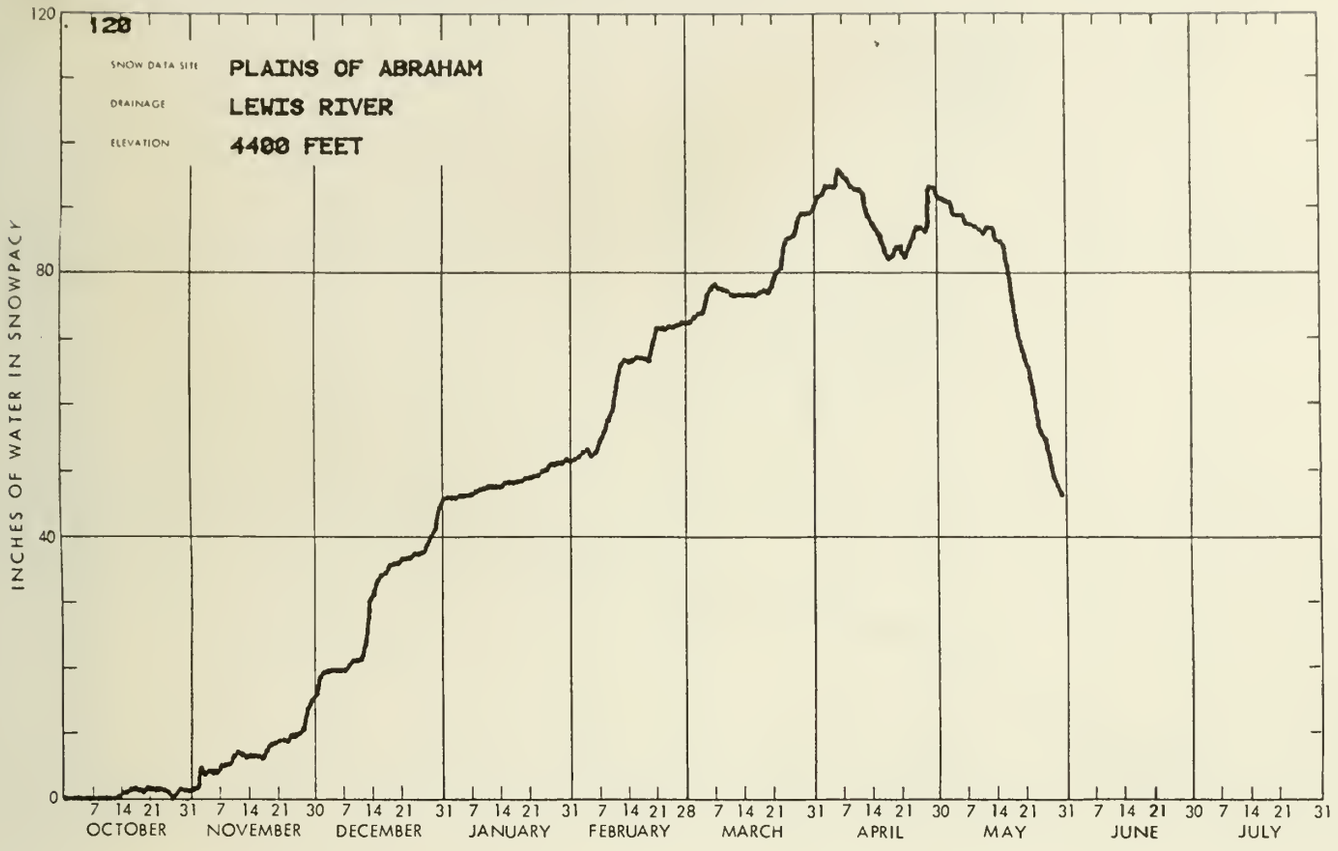
SNOW DATA SITE PARK CREEK RIDGE
DRAINAGE CHELAN LAKE
ELEVATION 4800 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


120
SNOW DATA SITE
PLAINS OF ABRAHAM
DRAINAGE
LEWIS RIVER
ELEVATION
4400 FEET
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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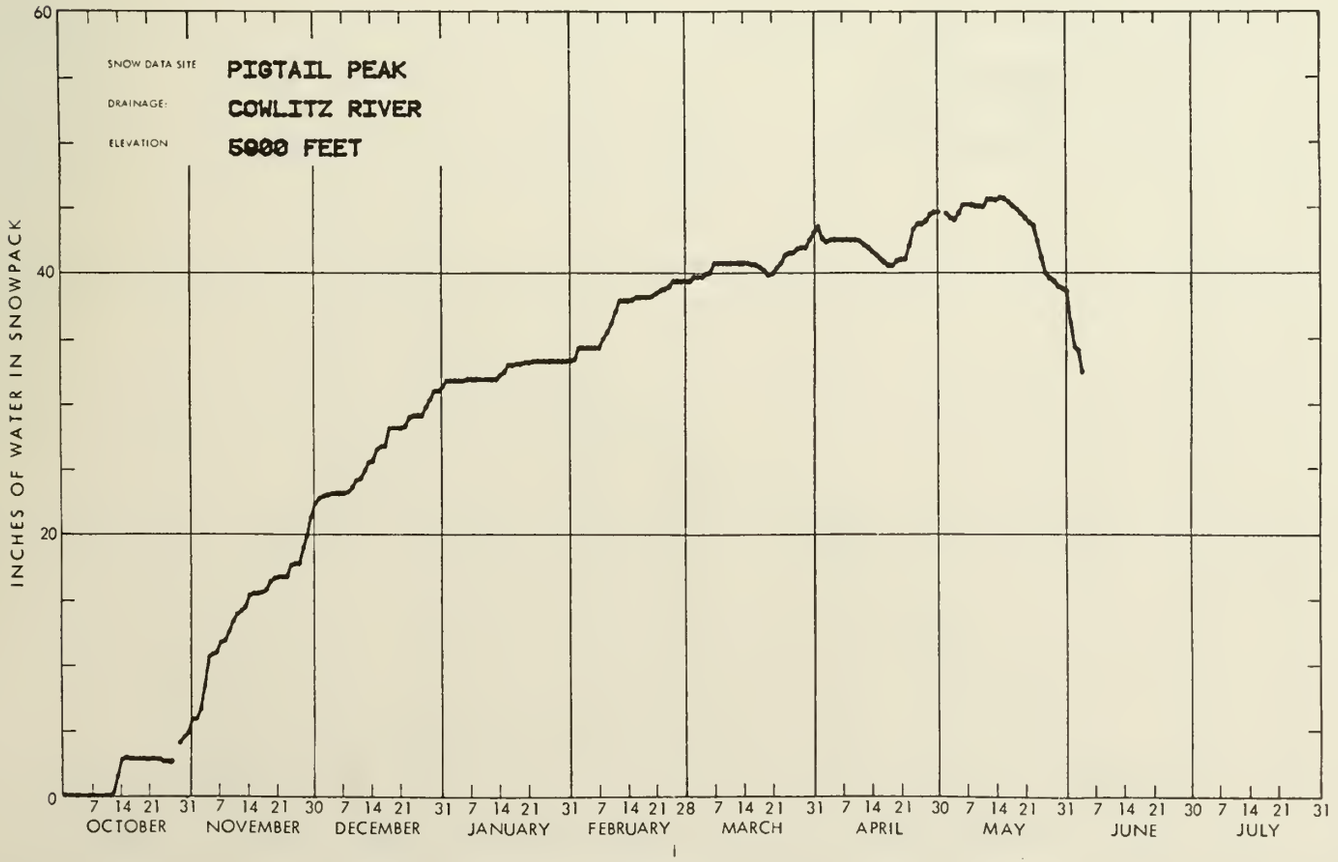
SNOW DATA SITE
PIGTAIL PEAK
DRAINAGE:
COWLITZ RIVER
ELEVATION
5900 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
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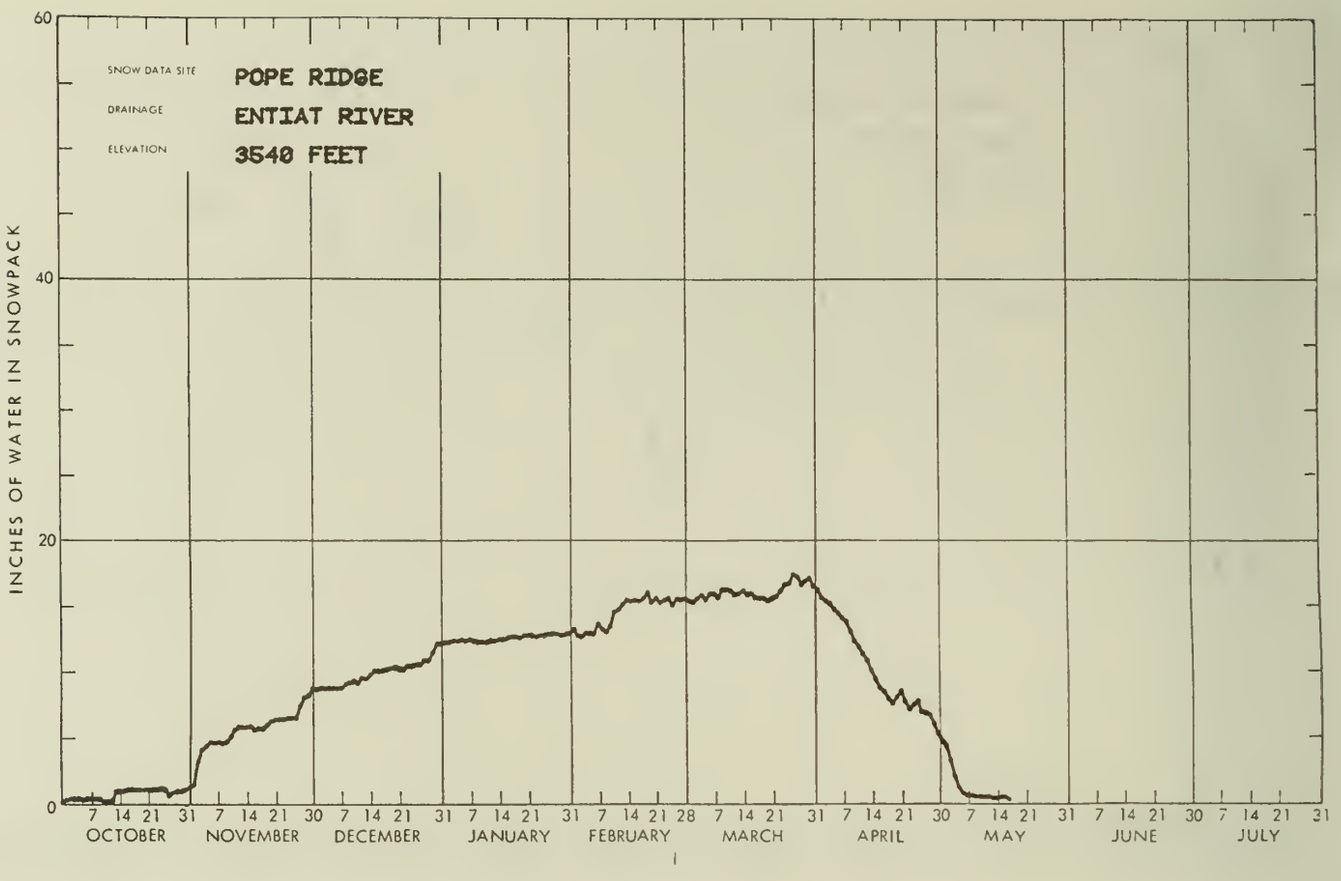
JUNE
JULY


SNOW DATA SITE
POPE RIDGE
DRAINAGE
ENTIAT RIVER
ELEVATION
3540 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
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MARCH
APRIL
MAY
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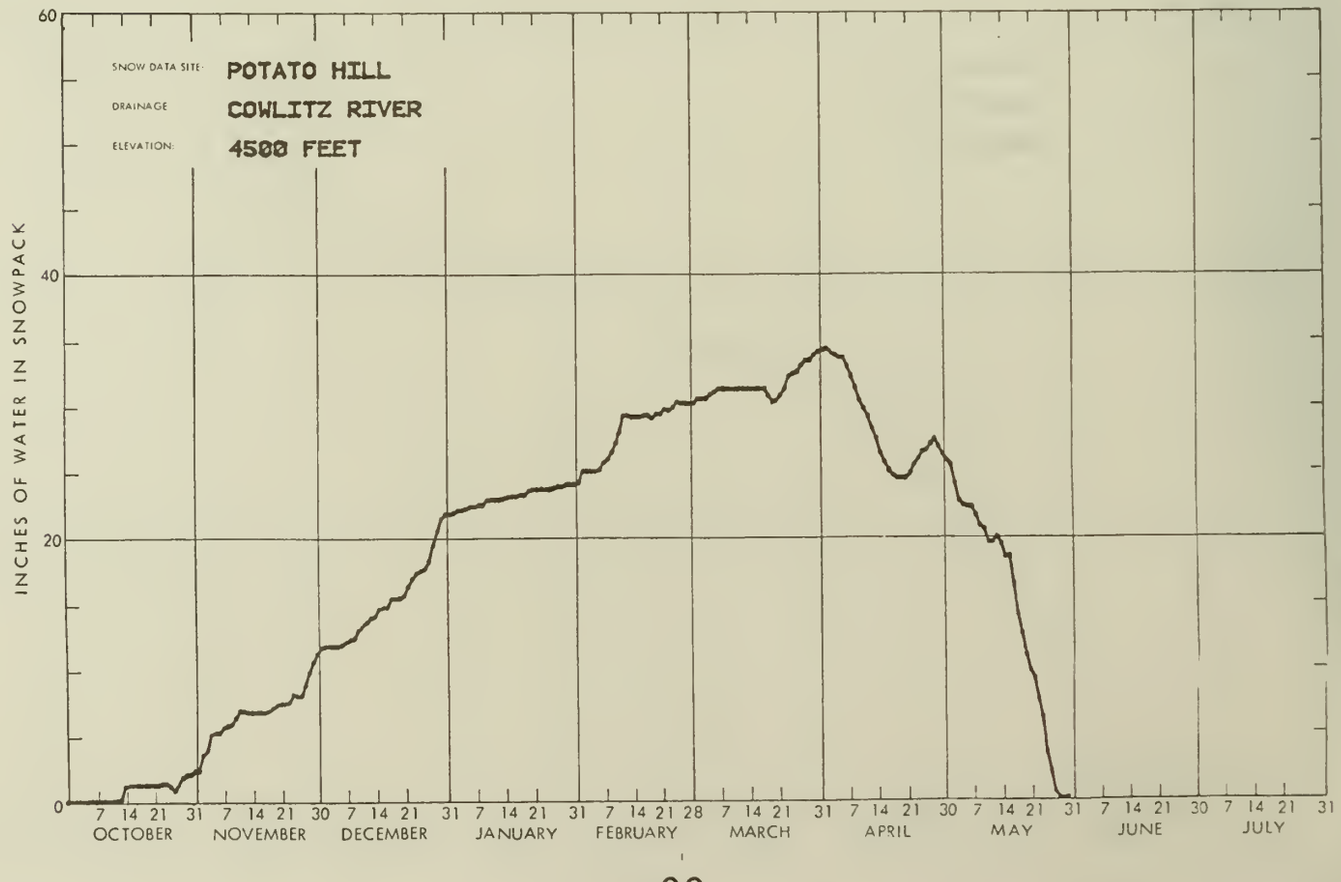
JULY

WSFB-X13C


SNOW DATA SITE
POTATO HILL
DRAINAGE
COWLITZ RIVER
ELEVATION
4500 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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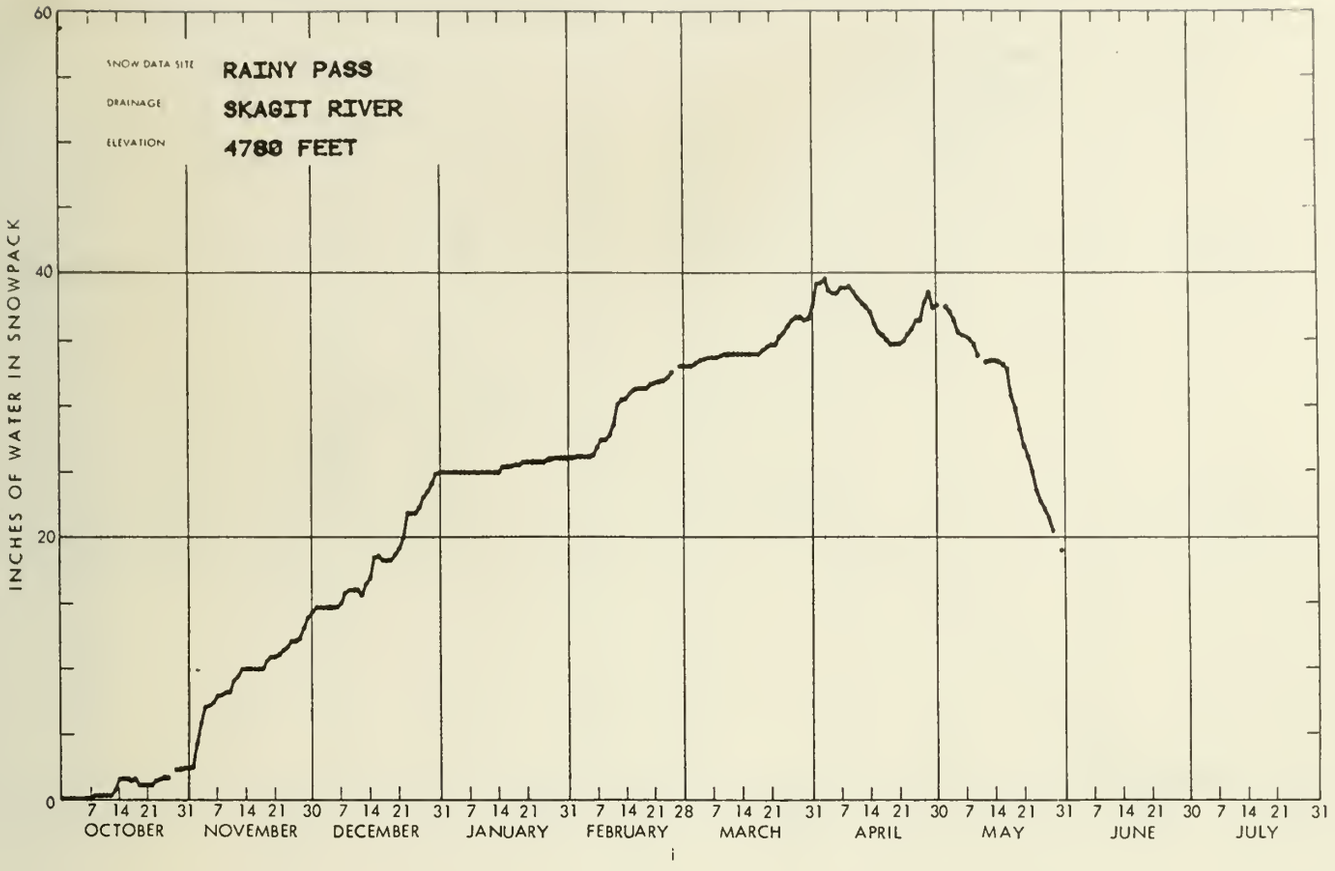
SNOW DATA SITE
RAINY PASS
DRAINAGE
SKAGIT RIVER
ELEVATION
4780 FEET
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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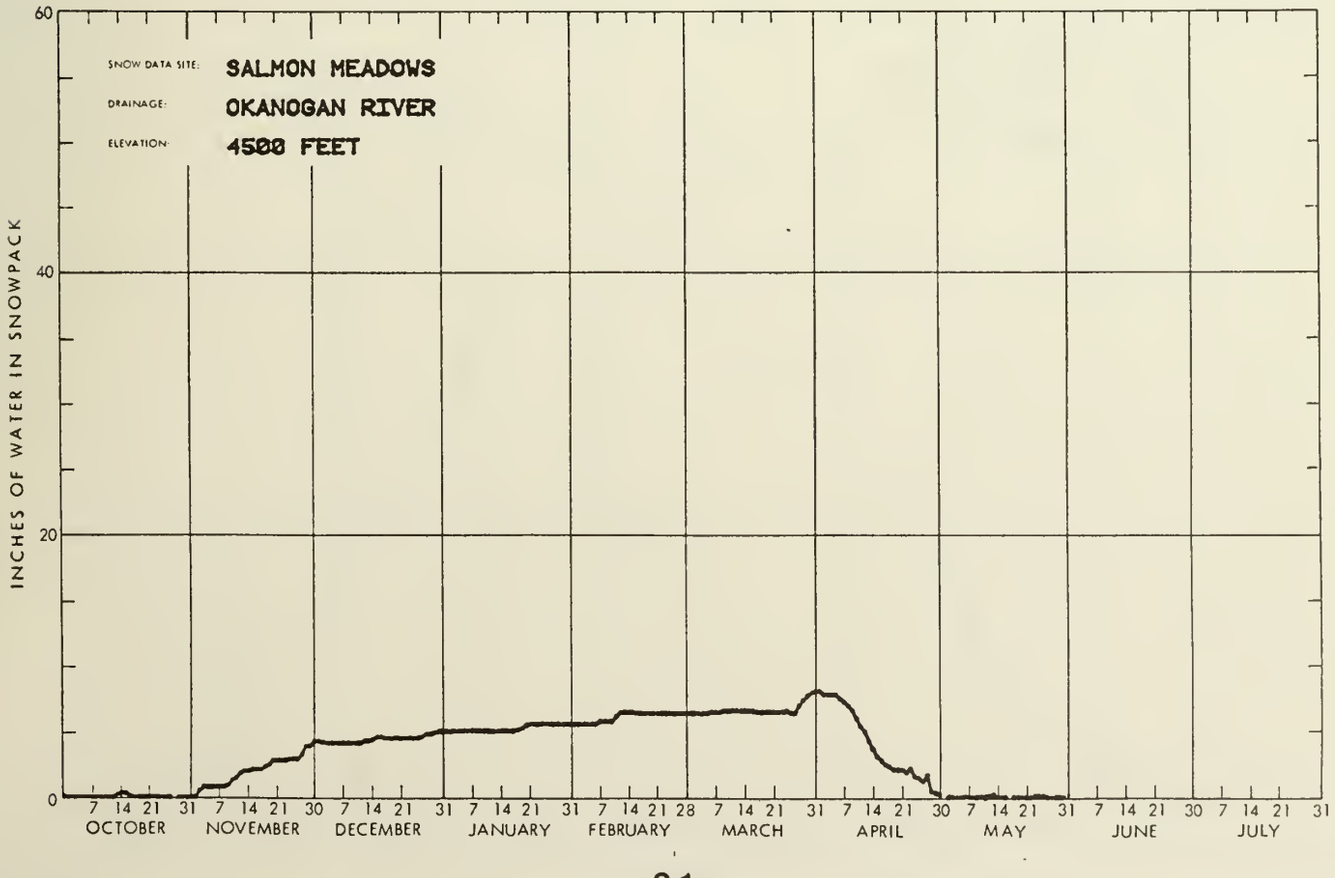
SNOW DATA SITE:
SALMON MEADOWS
DRAINAGE:
OKANOGAN RIVER
ELEVATION:
4500 FEET
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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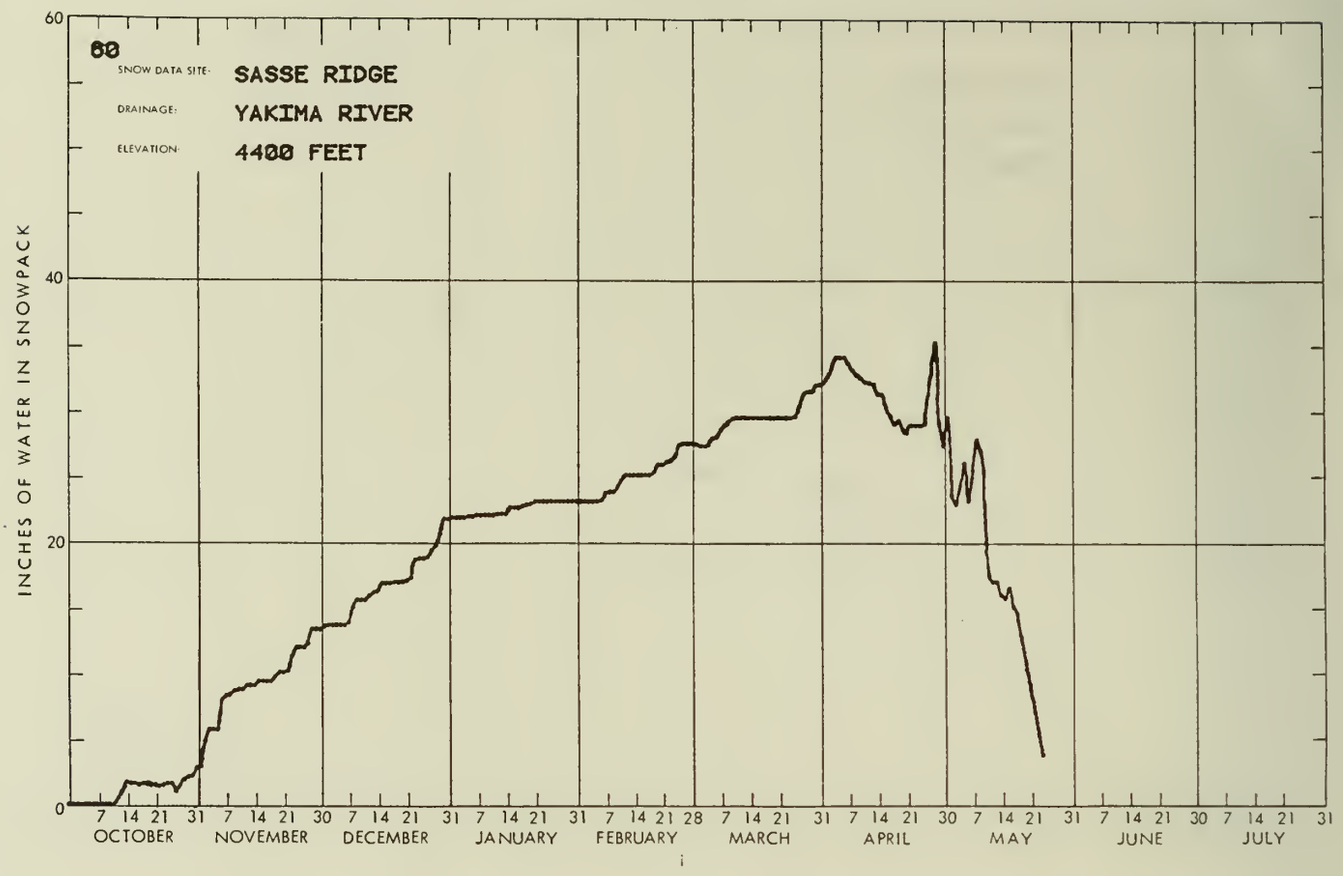
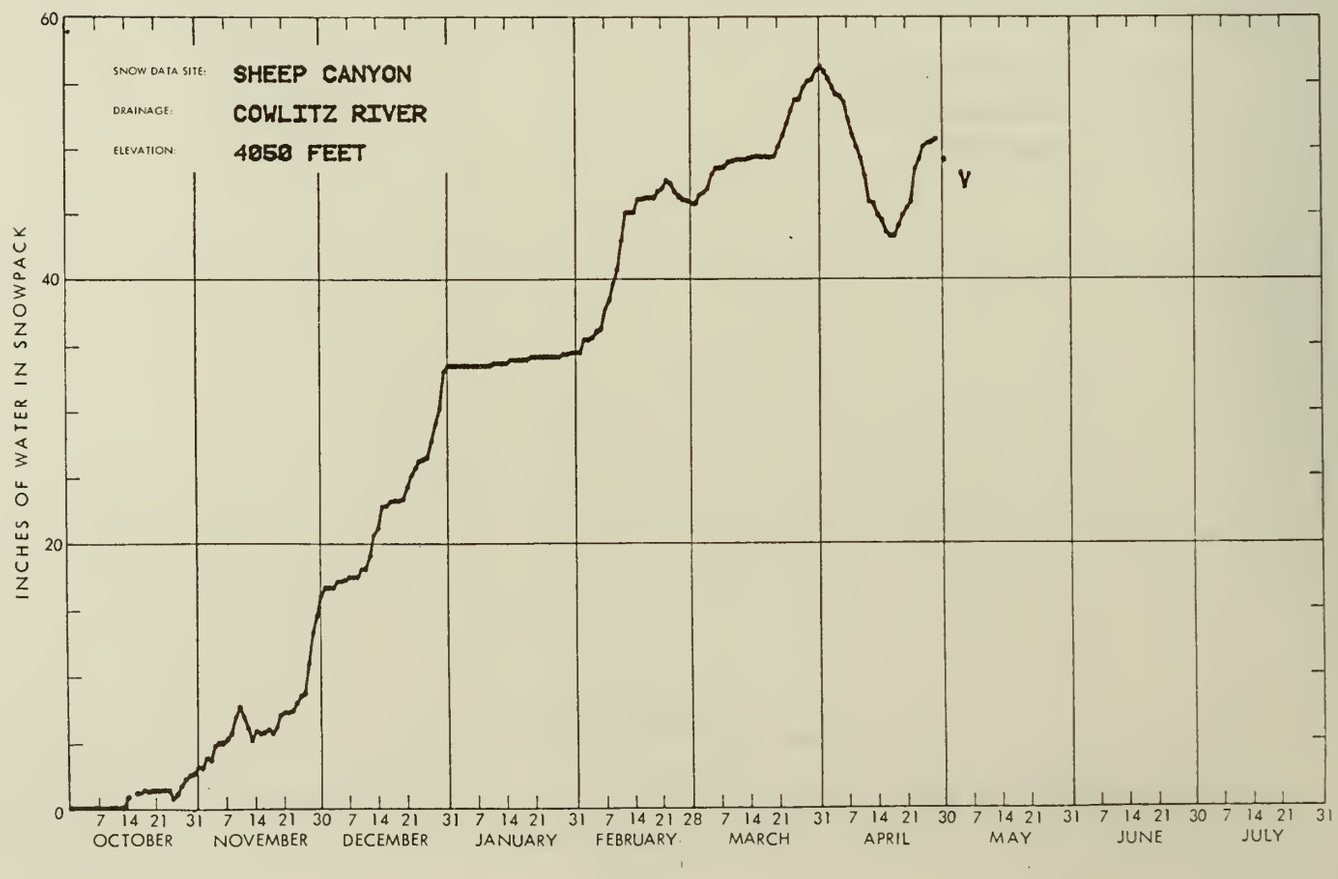
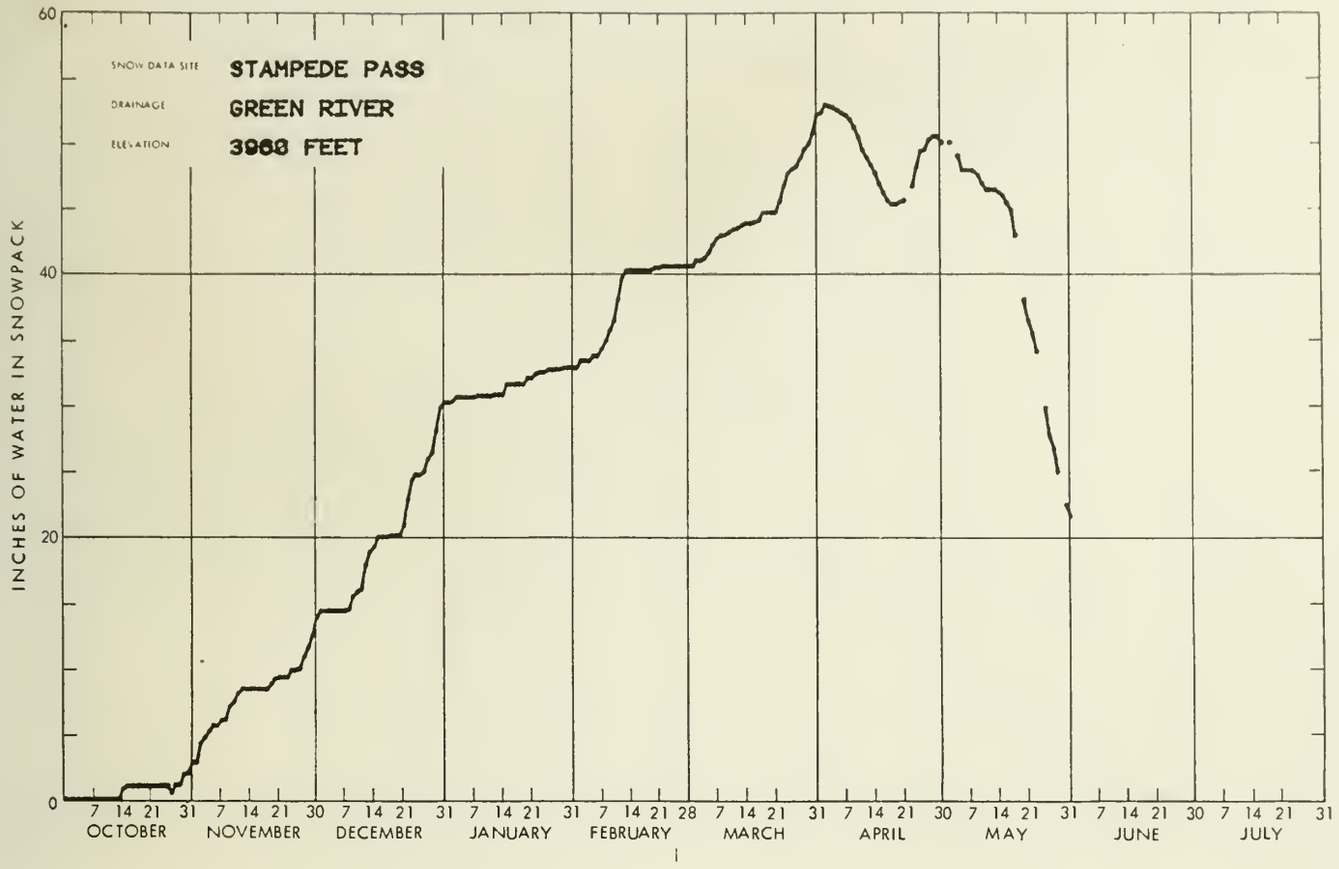

60
40
20
0
INCHES OF WATER IN SNOWPACK
80
SNOW DATA SITE: SASSE RIDGE
DRAINAGE: YAKIMA RIVER
ELEVATION: 4400 FEET
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


60
40
20
0
INCHES OF WATER IN SNOWPACK
SNOW DATA SITE: SHEEP CANYON
DRAINAGE: COWLITZ RIVER
ELEVATION: 4050 FEET
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE
STAMPEDE PASS
DRAINAGE
GREEN RIVER
ELEVATION
3980 FEET
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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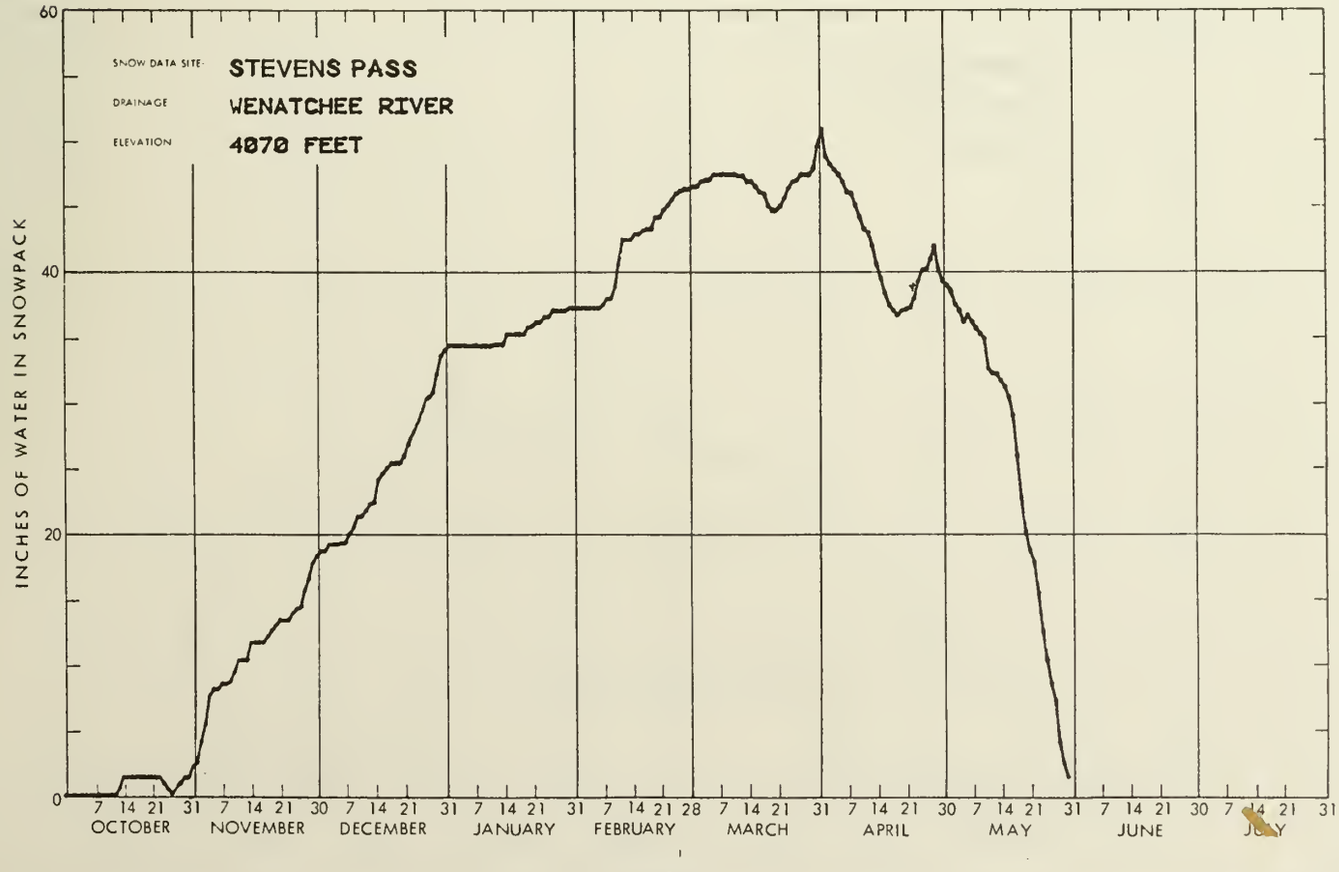
SNOW DATA SITE
STEVENS PASS
DRAINAGE
WENATCHEE RIVER
ELEVATION
4070 FEET
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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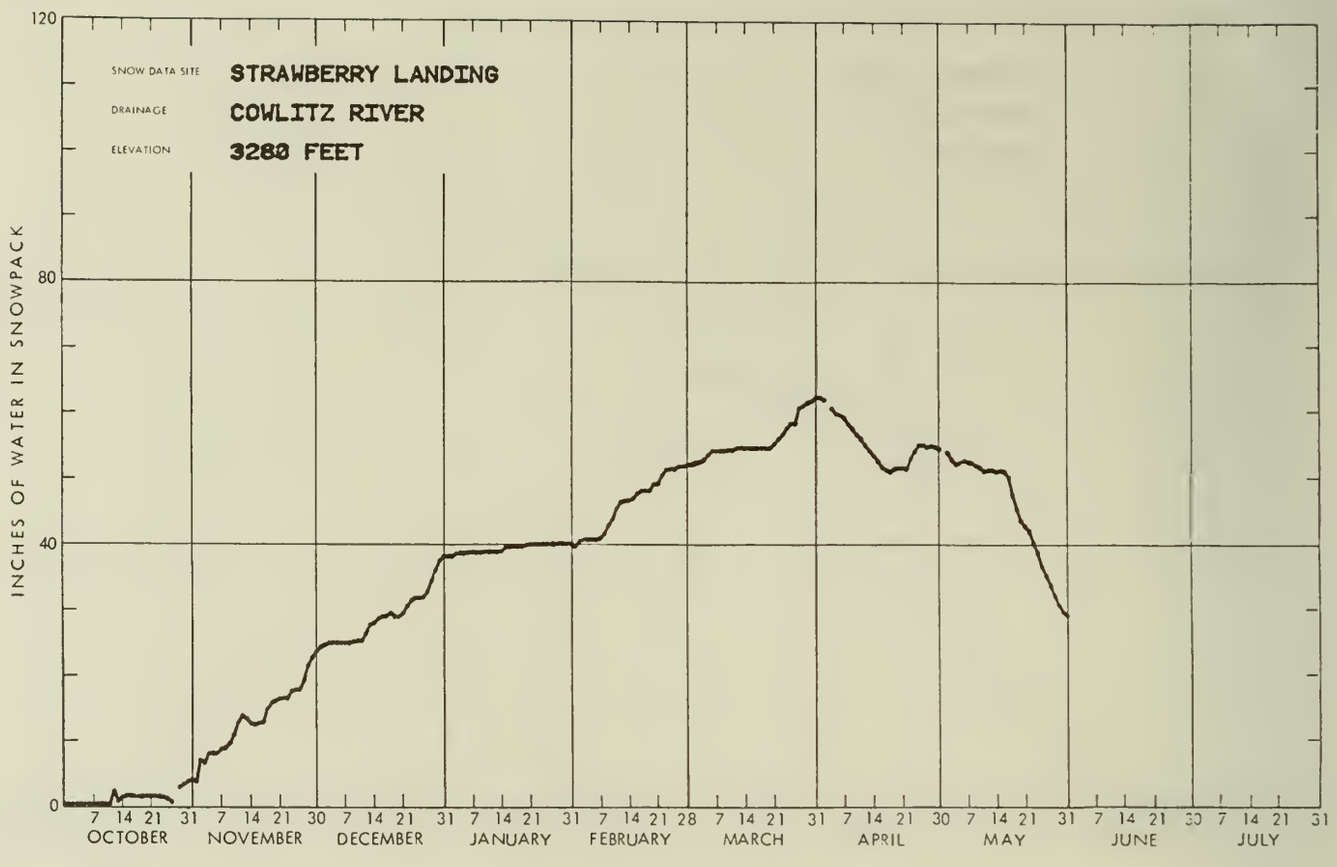
SNOW DATA SITE
STRAWBERRY LANDING
DRAINAGE
COWLITZ RIVER
ELEVATION
3280 FEET
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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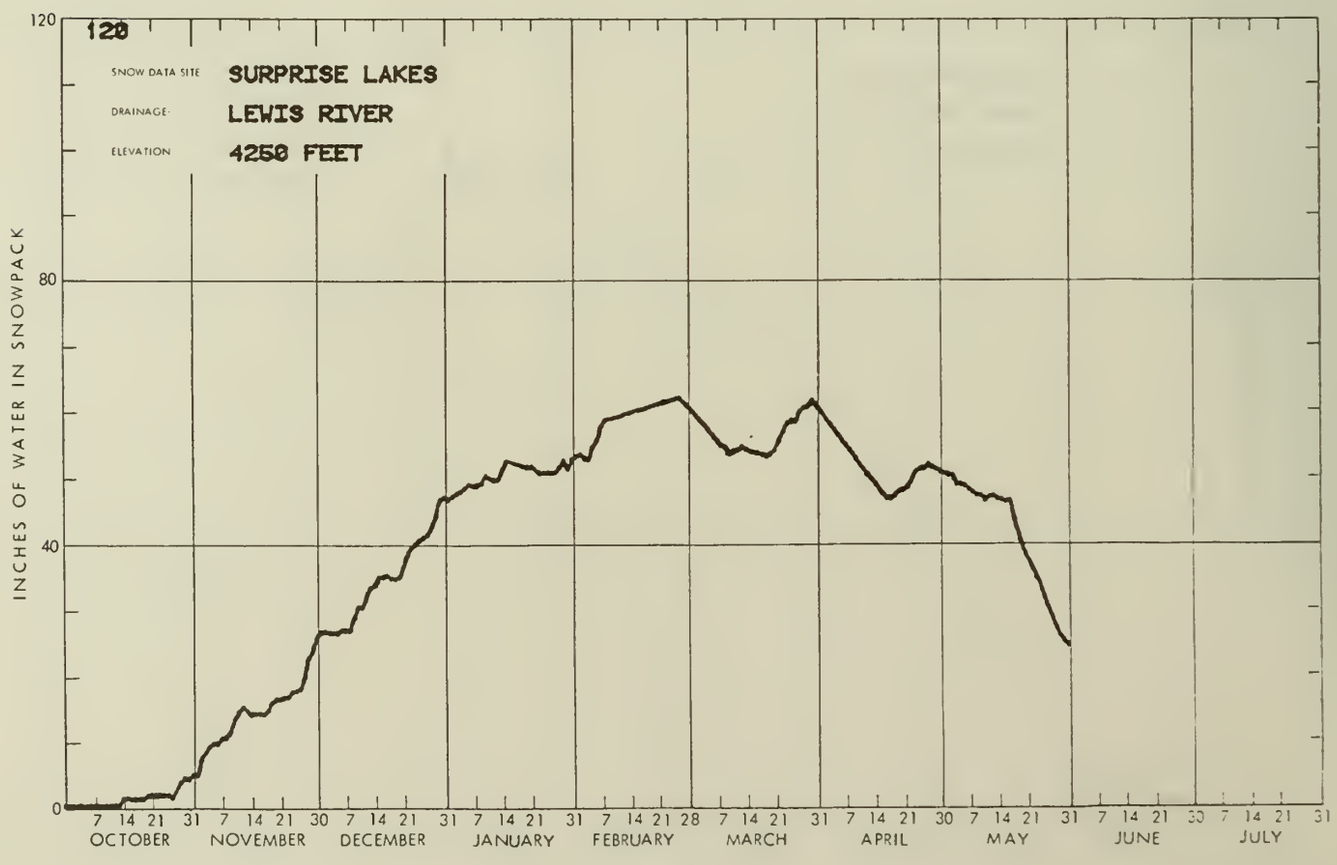
120
SNOW DATA SITE
SURPRISE LAKES
DRAINAGE
LEWIS RIVER
ELEVATION
4250 FEET
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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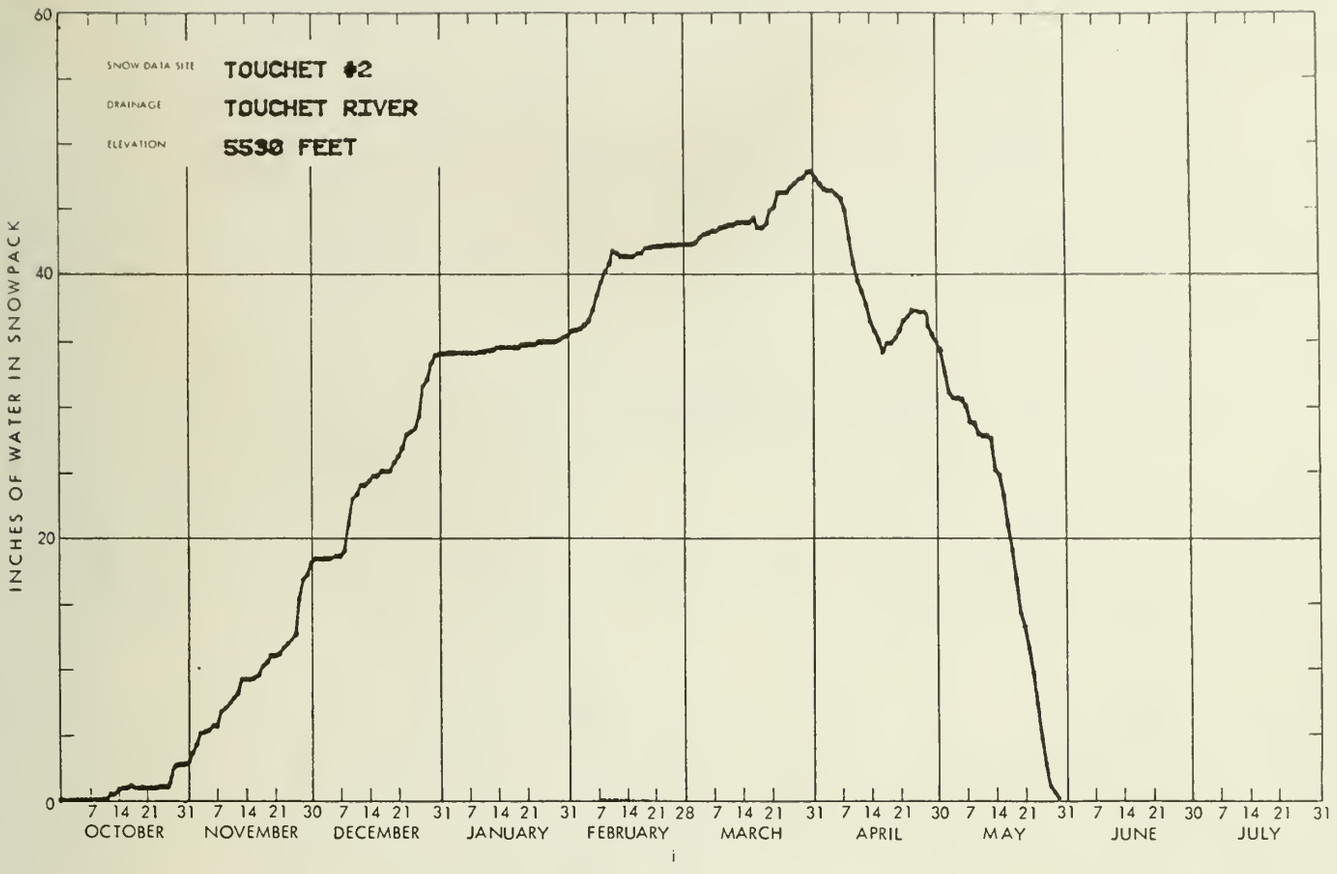
SNOW DATA SITE
TOUCHET #2
DRAINAGE
TOUCHET RIVER
ELEVATION
5530 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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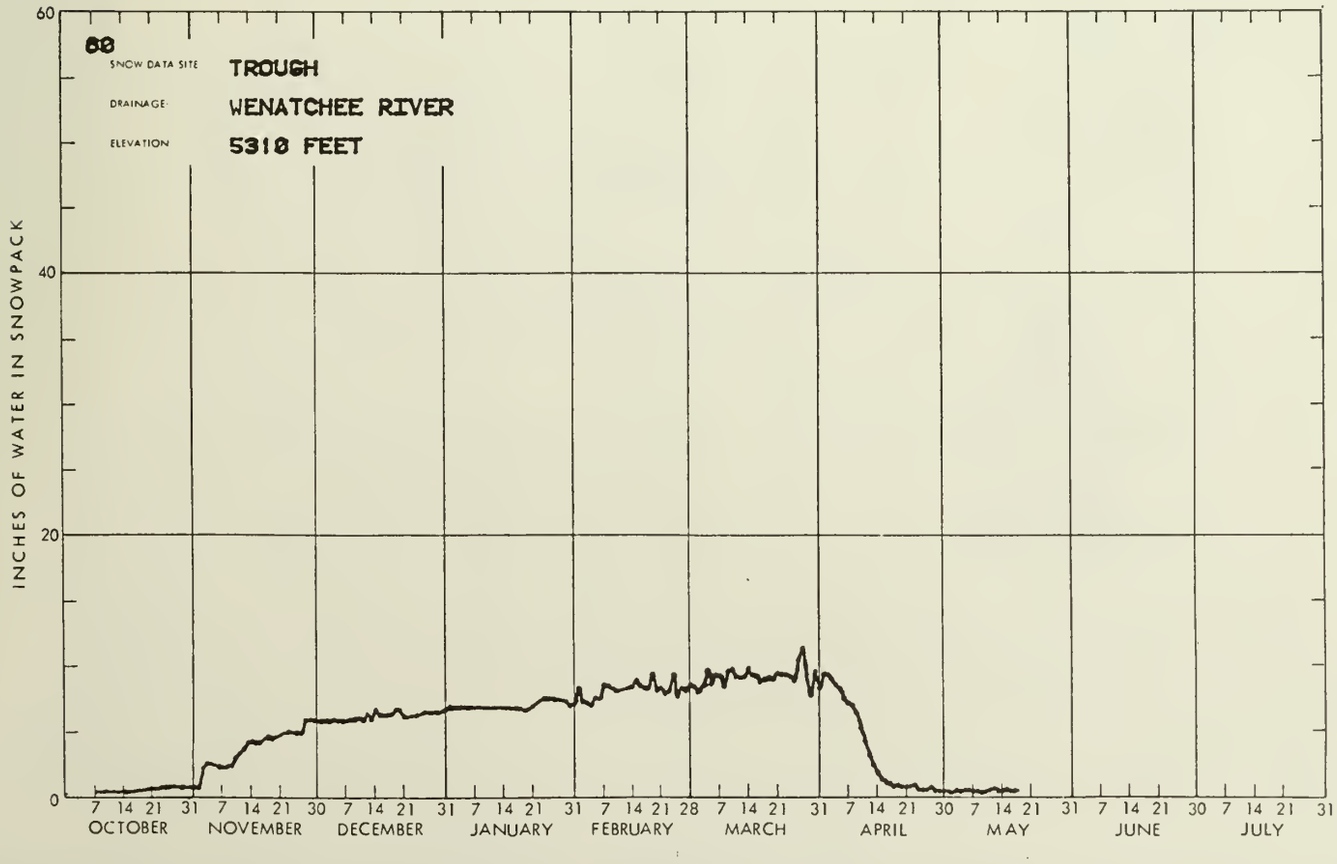
60
SNOW DATA SITE
TROUGH
DRAINAGE
WENATCHEE RIVER
ELEVATION
5310 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
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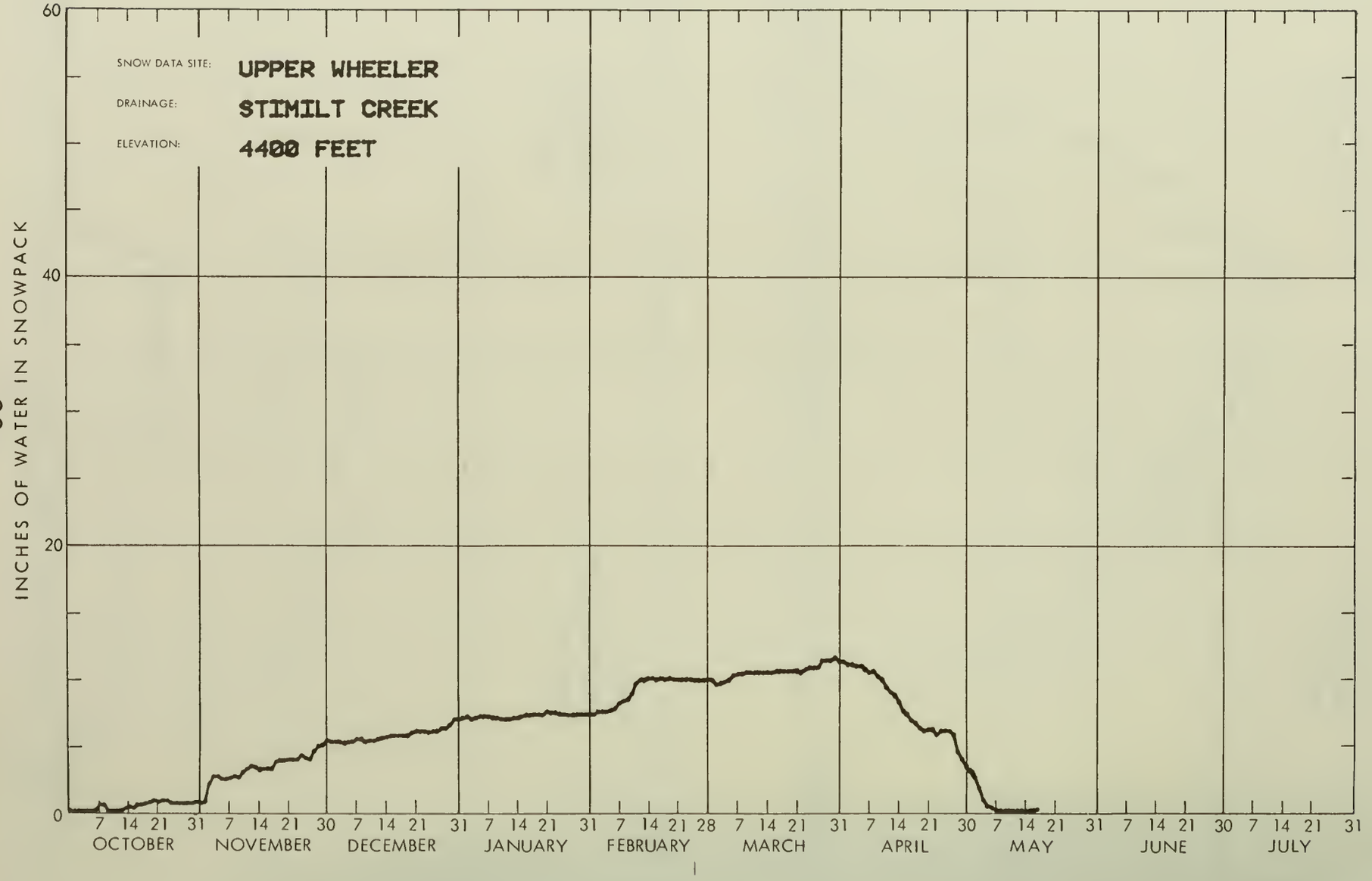
SNOW DATA SITE: UPPER WHEELER
DRAINAGE: STIMILT CREEK
ELEVATION: 4400 FEET
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Ministry of the Environment, Water
Investigations Branch, Victoria, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
Corps of Engineers
U.S. Department of Agriculture
Forest Service
U.S. Department of Commerce
NOAA, National Weather Service
U.S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Geological Survey
National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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